

**Biology Committee Webinar Summary  
February 22, 2019 9 am- 12 noon MST**

**In attendance:** Harry Crockett (chair), Paul Badame, Dave Speas, Melissa Trammell, Pete Cavalli, Travis Francis for Dale Ryden, Craig Ellsworth. Absent: Tom Pitts, Environmental Representative

**Interested Parties:** Tom Chart, Kevin McAbee, Julie Stahli, Kevin Bestgen, Cheyenne Owens, Tildon Jones, Matt Breen, Jojo La, Katie Creighton, Cameron Walford, Chris Michaud, Edward Kluender, Jenn Logan, John Caldwell, Don Tuttle, Tory Eyre, Ben Felt, Mike Partlow, John Hawkins, Darek Elverud, Mike Mills, Bill Miller, Lori Martin, Chris Smith

CONVENED: 9:00 am

1. Introductions. The BC welcomed Harry Crockett as the new chair.
2. Walleye basinwide summary and recommendations for 2018 - Chris Michaud presented a summary of walleye management in the upper Colorado River basin in 2018. He thanked all of the collaborating PIs on this project.

In the Colorado: Very few walleye were encountered prior to 2013, but since then walleye populations have dramatically expanded. In recent years, the Cisco reach immediately below Westwater Canyon has been where most of the captures occurred (noting that level of effort varies between years). Both gizzard shad and walleye populations have increased over the last five years or so. Because gizzard shad are a primary prey species, they may be driving the walleye expansion.

In the Green: Walleye catch has declined since peaking in 2013, but remain uncomfortably high. The Yampa, upper Green, middle Green and Deso reaches showed very low catch rates for walleye. In 2018, the largest documented number of walleye were encountered in the lower Green River immediately below Tusher Diversion. Highest catch rates occurred during targeted removal (concentrated in the upper 10 miles), but pikeminnow estimation passes also showed relatively high catch rates. Catch rates of walleye on the Duchesne have declined substantially since 2017, thought to be driven by the low hydrology of 2018, which made much of the river inaccessible to sampling boats. The lower Green population is dominated by fish of shorter lengths than the middle Green population indicating the source of these fish may be Lake Powell.

Potential sources: The walleye population in Lake Powell is increasing (documented by UDWR); a walleye movement study out of Lake Powell is currently underway. Substantial variation has been seen at the netting station right next to the Colorado River inflow. Other potential,

but less likely sources include Starvation Reservoir (temporary screen in place, permanent screen planned), Rifle Gap Reservoir (permanent screen in place, ~36k triploid stocked annually), Red Fleet Reservoir (~400k triploid walleye stocked, permanent screen planned); these sources are less likely because escapement is controlled at these sites. No in-river recruitment has been documented.

Recommendations: Continue to explore contribution of Lake Powell (the otolith project is not effective at differentiating between populations in Lake Powell and the Green and Colorado rivers). Recommend a technical report focusing on factors affecting walleye distribution within the upper Colorado River basin. Continue targeted removal on both the Green and Colorado Rivers, including removal during Colorado pikeminnow estimates (on the Colorado River in 2019). UDWR-Moab will concentrate on taking way-points of each walleye encountered to discern patterns on a finer scale.

Questions that remain: What is the contribution of Lake Powell to lotic population? What are the primary drivers between the large spatial heterogeneity in catch rates? What is the effect of Tusher diversion having on movement? Is debris that accumulates during Spring preventing upstream movement of walleye?

Harry asked if funding was needed to replace the sonic underwater receivers (SUR) within and upstream of Lake Powell, and how much might be needed. Travis said each SUR is approximately \$1000. Koreen asked how far upstream the SURs are placed. The most upstream is at the confluence of the Colorado and Green at Rockslide but it keeps getting sedimented in so there is limited data. Another at the Hite Bridge regularly produces data. UDWR has units at the Slide (RM 1.5), Brown Betty (RM 4.0), Big Drop 1 (RM -13.5), Rockfall Canyon (RM -32.5) and Hite Bridge (RM -45.7) on the Colorado and at Mineral Bottom (RM 52.2) on the Green. The SURs are really placed to detect razorback sucker, but can also detect walleye tagged with sonic tags. Only 30 walleye have been implanted in the inflow area, making detection upstream unlikely. Melissa noted that documented timing or size of fish can be gleaned from SURs, but that the fact that they are moving upstream is well documented. She asked if effort would be better spent determining methods of control. Travis agreed and said timing may be important because of opportunities for active netting at certain times of year. Dave Speas reiterated that blockage at Tusher is likely, but an O&M contract has recently been implemented that may remove the blockage. Paul says the high concentrations around Tusher may be because they have found optimal habitat conditions around the diversion instead of running into a barrier. Travis noted there is no barrier at Westwater, but they actively remain in the area anyway. Paul agreed that actions should be focused on management opportunities. Melissa asked if diet studies have occurred. Travis said all PIs scan stomachs for PIT tags, some field stations open stomachs of captured walleye. Pikeminnow, bonytail and razorback sucker tags were documented in walleye stomachs across the basin (6 RZ and 6 BT in STReaMS, one untagged CPM will be added to STReaMS). Kevin said other than Lake Powell, there were only a few other places that could even possibly be a walleye source, such as Starvation outlet works or Midview Reservoir. Dave said walleye may just be sourced from historic spills (e.g. 2011) because they are long lived fish. Kevin noted that in 2018, fall removal of walleye was not completed because many seasonal staff were let go because of the funding uncertainty for 2019. Tildon said many walleye captures

on the upstream Colorado segments come from Colorado pikeminnow estimates which did not occur in 2018, so distribution data for that year may be skewed.

- Duchesne River access update - Matt Breen has requested access permits for the Duchesne River with the Ute Tribe. Usually, permission is given in conjunction with the start of field season. Tildon noted that the Duchesne already has a full year of snowpack on the ground and access is likely to be physically possible in 2019. Matt said more individual walleye are captured further upstream, but currents are very strong, complicating sampling (there are likely more fish than data reflect).
- Basinwide reports for other species - Kevin said a species specific walleye report was requested by the Program Office a few years ago. Chris expressed support for additional species-specific reports which gather and store data, analyze and report in a consistent manner making assessment easier. Chris thinks this may decrease the overall amount of reporting by field offices, produce better products and facilitate planning for field efforts in a more timely manner. Dave noted that we report by species at the Researcher's meeting and asked what we would change from current methods while expressing a desire for more consistent reporting. Chris said we would need conversations to build something that works better. Paul said Colorado pikeminnow estimates may be a model.

3. Northern pike basinwide summary and recommendations for 2018 - Tory Eyre thanked all the biologists who conducted sampling and produced written reports.

Upper Colorado: Tory reported 195 hours of sampling produced only one northern pike in the upper Colorado River. The Mamm Creek Pits did not have a Merwin Trap because the pits did not connect to the river in 2018. Gill nets produced 181 pike in Mamm Creek 1 and zero pike in the other two pits. The most catches occurred during the first trips that occurred in early March. Travis noted one large northern pike (1010 mm) was captured on the Gunnison River outside of the scope of these projects. Jenn Logan reviewed that a Rifle backwater that typically houses northern pike produced no pike, but several razorback sucker.

Green River basin: Two northern pike were captured in Browns Park in the upper Green (FR-115), a dramatic drop from previous levels. Six pike were found in Lodore Canyon and one was captured in Whirlpool Canyon. Overall, this documents decreases in catch rates from highs in 2017. In the middle Green (123b; includes the Duchesne when possible), 60 pike were captured (vs 71 in 2017). Catch rate did increase slightly across all sampling in 123b. In the lower Yampa River (110), 18 pike were captured over three passes, 16 of which were large enough to be piscivores. In the middle Yampa River (98a), 293 net days over 13 backwaters in March and April produced 203 northern pike. A few backwaters produced the largest catch rates, but catch rates have consistently declined since 2016. 10 ripe females and 4 spent females were captured. During electrofishing in the middle Yampa, catch rates have declined since 2015 to 0.23 pike/hour this year (140 total). In the upper Yampa River (98b), catch rates increased in 2018, but the total catch was the lowest since targeted sampling began in 2005. Tory said the recent catch rates are not entirely comparable to previous estimates because sampling now targets prime habitat (estimates are higher than they would have been sampling all habitat). The highest concentrations were at the confluence with Elkhead Creek, followed by Dead Dog, river mile 157 and Wounded Knee. In the upper Yampa River (98c), 107 northern pike were captured over 21.7 hours. Total catch and catch

rates declined in 2018, reversing an upward trend seen between 2015 and 2017. The Elkhead Reservoir Fishing Tournament removed 319 northern pike over 9 days. Most fish caught in 2018 were juveniles. Anglers expressed high satisfaction and repeat, experienced anglers produced the most catches. More PIT tags need to be deployed in 2019 before the tournament in order to generate an estimate of the reservoir pike population. Overall, catch rates increased in three study areas along the upper Green and Yampa rivers, and declined in four study areas along the Colorado and other sections of the Yampa. A northern pike was reported by an angler in Kenney Reservoir; CPW followed the discovery with gill netting that confirmed pike presence. Melissa asked if there were plans to chemically treat Kenney Reservoir. Tory said both electrofishing and gill nets were used in 2018 and captured a single northern pike at the boat ramp, but more exploration is needed (and planned) for 2019. Three-species currently occupy the reservoir as well. Tildon asked if pike remain in Rio Blanco. Tory confirmed that pike are in Rio Blanco, protected by an inlet screen preventing movement. Human assistance would be needed to move pike from Rio Blanco into Kenney. CPW has concentrated riverine sampling around these two reservoirs (upstream of Kenney, upstream of Rio Blanco and further upstream) and found no pike. Dave and Melissa expressed support for as much concentrated effort as possible to remove a fledgling population before the population expands. Paul asked if treatment is being considered. Lori Martin said CPW has plans for intensive monitoring as soon as ice off occurs. Once more information is available, appropriate treatment plans have been made. Lori and Harry said all options remain on the table for discussion.

Chapman Reservoir (sits in the Flat Tops in Routt National Forest, and flows into Oak Creek/Yampa basin) houses a catchable rainbow trout fishery, but illicitly introduced northern pike were discovered by Billy Atkinson a few years ago. On November 21st, Billy and other CPW and Forest Service staff were able to treat the reservoir (when it was approximately 4 acres) and associated upstream riverine section. Further sampling is planned to confirm elimination of the northern pike population. PDO staff and BC members expressed thanks to CPW for eliminating that population.

#### Recommendations for discussion:

- Complete two marking passes in 98c above Hayden - John Hawkins noted pike removal efforts between Steamboat and Hayden are reported under project 125. Previously, USFWS conducted a mark recapture study on northern pike which last occurred in 2015. In 2015, 200 pike were estimated in the reach above Hayden. John is proposing a pike estimate using multiple mark passes to reduce variability; they will double tag with PIT tags in the cheek and purple floy tags. Sampling in that section is done very carefully because there is a strong trout fishery and most access points are on private land. Gill nets are not used overnight to avoid large brown or rainbow trout bycatch. 2019 is an ideal year to conduct a population estimate because Colorado pikeminnow estimates will not be occurring and Catamount Reservoir has not yet been screened, so this effort could provide a baseline on which to evaluate the screening effort. Tildon asked if there would be any issues with an average snowpack and access under bridge crossings. John anticipates that both mark passes can occur relatively quickly in succession so high flows can be avoided. John noted that backwater netting may be stopping too early in the season in most years to address competing priorities, so CSU-LFL thinks there is time

this year to compress both the marking passes and backwater removal to get them all in before flows peak. John said warm temperatures and early runoff would be the greatest concern.

- Population estimates in 98b Hayden to Craig (see attached proposal) - Tildon reviewed that both catch rates and overall catch has declined in the Hayden to Craig reach. Program biologists are seeking to document the effects of backwater netting and propose to generate an abundance estimate that will be comparable to [Zelasko et al. 2015](#). Chris Smith with USFWS will begin sampling in April and will tag fish with both PIT tags and floy tags. Then CPW will begin netting. USFWS will continue removals as typically occurs. Electrofishing will occur first, followed by netting and additional electrofishing. One confounding factor may be that there may be too few pike in the river to produce a reliable estimate. The group recommends focusing on the 98b reach because it has the most pike and would hopefully allow marking of sufficient fish to produce an estimate. Sampling is recommended this year because pikeminnow estimates will not compete for staff and boat hours. In addition, pairing this with the 98c estimation was desired. CSU created preliminary estimates based on electrofishing catch rates and the mean annual capture probability in recent years. The range of estimates was provided using the minimum and maximum capture probability per reach. Koreen clarified the graphs include both population estimates with error bars on the left and projections with ranges on the right. A decline in the overall numbers of fish is anticipated in the Hayden to Craig reach. 2020 would provide a second opportunity if the efforts are unsuccessful in 2019. Melissa asked if this would be doable within current scopes. Tildon clarified that all the sampling could occur in current scopes, but the analysis is not currently covered. Kevin Bestgen will prioritize analysis in 2019. The BC approved this effort to occur in 2019.
  - Tildon noted that since pike are being tagged it is important that all PIs look for PIT tags and floy tags in both walleye and pike. >PDO will add this to the guidance distributed for the 2019 season.
4. Smallmouth bass basinwide summary and recommendations for 2018 - Chris Smith thanked all parties involved in smallmouth bass sampling and analysis. Chris reviewed runoff conditioned across both basins and noted all were below median, making bass removal difficult. On the Yampa, flows were not sufficient to sustain recommended fish flows (19 cfs) and so a call was issued on the river. On the White, flows dropped to 24 cfs and on the Colorado, flows dropped to 90 cfs. Low flow conditions prevent access for boats, and support bass reproduction.

Green River: High catch rates of smallmouth bass were seen on the White River, the Colorado River through the Grand Valley, and in parts of the Yampa and Green. High overall bass catch rates were largely driven by age-0 and sub-adult bass captures. Adult smallmouth bass catch rates were concentrated at the Green/White confluence. Before 2018, high catch rates were seen in the Yampa in 2016. Adult catch rates in the Yampa in 2018 maxed out at 6.0 CPUE for electrofishing, but were coupled with other methods not documented in the presentation including e-seines and angling. Adult catch rates seem lower than in past years. Subadult catch rates were higher than adult rates and were highest in Upper Maybell and Craig/South Beach. Juvenile catch rates were highest near Craig, but also seen in Maybell,

Lily Park and Yampa Canyon. The Yampa Canyon juvenile catch may be the result of nesting documented in 2017. YOY hatched in 2018 are not captured as part of reported removal efforts because of the timing of sampling. Strong juvenile year classes expanded in 2018 and may be expected again in 2019. In the Green River, adult catches were highest around the White and Duchesne river confluences and the reach near Ouray NWR. It is difficult to discern whether catch rates are spiking because of fish coming from either the White or Duchesne. Sub-adult captures in this reach were highest in the same area, spiking downstream of the White River. Juvenile catch rates were higher than both adult and sub-adult catch rates and spiked further upstream between Jensen and the Duchesne River. Length frequency analyses show limited bass populations in Lodore Canyon and a peak in juveniles in the Echo-Split reach. Adult catch rates downstream of the White increased about five miles downstream of the confluence and peaked above Sand Wash, but declined dramatically through Deso-Gray. The pattern was similar for subadult bass, with the highest catch rates in the whole basin occurring downstream of the White. Juvenile catch was remarkably low from the confluences through Deso-Gray, however, sampling was limited during the time we would expect to catch those sizes. In 2018, less bass were captured than in 2013, but increases were seen from 2017. Length-frequency analysis showed low catch rates throughout all the size classes in Deso-Gray. In the White River, adult smallmouth bass catch rates peaked below Taylor Draw Dam. A high degree of reproduction occurs upstream of Rangely, but unfortunately occurs at the same time and in the same locations for roundtail chub. Subadult catch rates were high along most reaches on the White, showing downstream expansion. Age 1 juveniles were documented at varying catch rates, spiking downstream of the confluence with Douglas Creek and in the Utah reach upstream of Evacuation Creek. Although juvenile and sub-adult catch rates are similar to 2013 levels, removal seems to be decreasing adult population levels.

Colorado River: Smallmouth bass control on the Colorado occurred in most reaches, but some areas were inaccessible due to low flows. Although adult catch rates were low, they increased from 2017. Subadult catch rates were also low in comparison to other reaches. The juvenile catch rate in the Grand Valley was the highest in the upper basin. This may be because high fall temperatures allowed for an extended growing season and increased recruitment in 2017, but also may be sourced at off channel ponds. Length frequency analyses show a dominance of small fish, less than 100 mm. Exploration is needed into the source of these juvenile fish.

Recommendations: Project 125: Reallocate effort to ensure removal occurs during spawning in Upper Maybell. Project FR115: Use flow spikes in the Green River to disadvantage bass. Project 123b: Transfer 8 days of smallmouth bass removal to four days each in spring and fall effort on the White River. Project 123a: Add passes to address potential increases in populations from 2018 low flows. Project 167: Continued removal, additional 3 2-day passes in Big Trujillo to Utah line to compensate for no removal during CPM estimates. Coordinate with Rio Blanco Water Conservancy District to provide flow spikes. Add 8 days (4 in Spring and 4 in Fall from 123b) to limit effects on native fish communities.

- Deso passes in lieu of 128 Colorado pikeminnow passes - Katie Creighton said in most years, UDWR-M has only done 1 pass through Deso for smallmouth bass removal because USFWS-V has been doing pikeminnow estimates in those areas. Katie is

proposing to adaptively change who does which passes throughout the season to provide additional flexibility. This would allow field crews to work together to target efforts towards patterns that they see on the ground. In previous years, efforts have been adaptively managed within smallmouth bass, but have not varied effort between species. Dave asked if there is a way to build this flexibility into scopes of work. Dave has to document the changes that are made and encouraged all PIs to add language to contracts to allow for on-the-fly changes. Tildon asked if the fact that they report based on agreement level helps in that flexibility. Dave encouraged as much as possible to be documented in the scoping process.

- White River control options - Kevin drew the group's attention to the robust White River bass population, despite removal efforts. Chris Smith proposed continued focus between Taylor Draw Dam and Big Trujillo (focusing above the confluence with Douglas Creek) with continued attention to the presence of roundtail chub. Jenn Logan and Chris have developed a plan to address this. There is another stretch between Big Trujillo and the state line where bass removal effort will continue, with paired sampling between both offices at the same time. This sampling is likely to be covered by current scopes and funding levels. Jenn added that both crews will use the launch at Taylor Draw Dam no matter which sampling reach they are targeting. They will plan to shock directly downstream of the dam during each launch. Melissa asked if the flow spike out of Taylor Draw released to dislodge algae affected the population. Kevin Bestgen said the flush occurred too late to have a dramatic impact on the population as the fish were large enough to recover. Tom Chart said that work will continue with Alden Vandenbrink to make the timing more effective for bass removal.
- Fall sampling in the White River - Matt recommended reallocating crews to target the White Reaches downstream of the state line. Currently, Matt's scope includes 12 days of sampling in the White River with an exploratory trip followed by targeted removal trips. He is suggesting additional fall sampling once flows increase post-irrigation; these days would be in lieu of days on the middle Green River (no costs, just reallocation of effort). He also recommends reallocating 4 days of spring effort from the Green to the White. A total of 8 days will be shifted from 123b, 4 in the Spring and 4 in the Fall as flows allow. Some trips that previously occurred as day trips will become overnight trips. The fall effort will target adults as a full pass which will also help document hot spots for future efforts. The BC supported the effort.

Tildon noted that how the water comes off the White does not preclude spawning conditions, which makes it a difficult situation to manage.

Harry recommended adding the 158 discussion and a discussion about flexibility in scopes of work onto the BC agenda for March. Julie added both to the agenda. Program guidance will be forthcoming to assist in those efforts. Kevin thanked everyone for their attendance and attention for a long and detailed meeting. Paul asked the presentations be distributed with the BC summary. >Julie will distribute them. Melissa asked if a NNF workgroup meeting will be scheduled soon. Kevin said that will be considered after our post-2023 discussion. Melissa recommended developing a backup plan for the January Researcher's Meeting scheduled for

Durango in case travel is difficult due to weather. >The PDO will explore options.

**ADJOURNED: 12:27 pm**