

From: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>
Sent: Wednesday, August 19, 2021 4:13 PM
To: Unger, Sophie <Sophie.Unger@icf.com>
Subject: RE: Sites green sturgeon questions

Hi Sophie,

Here's a brief overview of our juvenile sturgeon tagging and monitoring study:

Our primary sampling location is currently in the Delta (Sacramento River channel north of Sherman Lake). We're sampling with 300-ft long x 8-ft tall 2" mesh gill nets anchored with 40-lb weights. When we initiated this study in late 2015, we conducted sampling in numerous locations in the lower Sacramento River from near Tisdale downstream to near our current primary sampling location).

We were unsuccessful in capturing any juvenile sturgeon in the riverine reaches (above tidal influence) of the Sacramento River which I attribute to several reasons: Inability to fish the gill net on the bottom without the net rolling and bunching; heavy loading of net with drifting debris, and the low recruitment of green sturgeon to the juvenile life stage during the 2013-2015 drought years.

We found the Delta more conducive to gill net sampling, although drifting aquatic vegetation, particularly *Egeria densa*, fouls the net and reduces capture of juvenile sturgeon and bycatch. We found that the reach of the Sacramento River north of Sherman Lake typically has less drifting aquatic vegetation primarily due to slower tidal current velocities which allows for more effective gill net sampling. We have been conducting two days a week year-round except late winter through mid-July in 2018 due to other priorities. While we have captured juvenile green sturgeon in every month of the year, our highest CPUE is typically from late-June through mid-September. Based on real time telemetry data, it appears that our sampling area is rearing habitat as well as a migration corridor.

As for juvenile green sturgeon migration timing from the upper Sacramento River spawning and initial rearing habitat, Bill Poytress (USFWS Red Bluff) has conducted juvenile tagging and monitoring efforts in the not too distant past. I've attached a link to the 2018-2019 data, and I think there is also data from 2017-2018 but can't find the link to it. Granted, it's a small sample size, but I think this data is more relevant to potential affects of the Sites Reservoir project.

https://oceanview.pfeg.noaa.gov/CalFishTrack/pageSRGS_2019.html

Regards,
Marc

Marc Beccio
Environmental Scientist – Anadromous Fisheries

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From: Unger, Sophie <Sophie.Unger@icf.com>
Sent: Wednesday, August 18, 2021 04:19 PM
To: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>
Subject: RE: Sites green sturgeon questions

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Hi Marc,

I'm sorry to hear about the AQI, but not surprised. I look forward to seeing the results of your green sturgeon research.

Best,
Sophie

From: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>
Sent: Wednesday, August 18, 2021 4:13 PM
To: Unger, Sophie <Sophie.Unger@icf.com>
Subject: RE: Sites green sturgeon questions

Hi Sophie,

I'm just finished the last of three 11-hour field days today and will provide you with answers to your questions tomorrow am as it appears the AQI will not allow for field work tomorrow.

Regards,
Marc

Marc Beccio
Environmental Scientist – Anadromous Fisheries
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From: Unger, Sophie <Sophie.Unger@icf.com>
Sent: Monday, August 16, 2021 09:53 AM
To: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>
Subject: RE: Sites green sturgeon questions

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Thank you, Marc. That would be great.

Sopihe

From: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>
Sent: Monday, August 16, 2021 9:26 AM
To: Unger, Sophie <Sophie.Unger@icf.com>
Subject: Re: Sites green sturgeon questions

Hi Sophie,

I'm in the field all week but I'll try and provide you with answers tomorrow.

Regards,
Marc

Sent from my iPhone

On Aug 12, 2021, at 6:16 PM, Unger, Sophie <Sophie.Unger@icf.com> wrote:

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Hi Marc,

I'm very curious about the green sturgeon data you sent me. Would you be able to tell me a bit about where and when? Specifically, where, in general terms, you sampled the sturgeon juveniles (in the mainstem Sac? In the Delta?, both?) and the months that you sampled or, if you sampled all year, did you catch primarily at certain times? I would be grateful for anything of this sort that you can provide. The more specific information available, the easier any analyses of effects would be.

Thank you,
Sophie

From: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>
Sent: Thursday, August 12, 2021 10:40 AM
To: Briard, Monique <Monique.Briard@icf.com>; Unger, Sophie <Sophie.Unger@icf.com>
Cc: Huneycutt, Andrew@Wildlife <Andrew.Huneycutt@Wildlife.ca.gov>; Hendrick, Mike

<Mike.Hendrick@icf.com>; Greenwood, Marin <Marin.Greenwood@icf.com>; Kilgour, Morgan@Wildlife <Morgan.Kilgour@Wildlife.ca.gov>

Subject: RE: Sites green sturgeon questions

Attached is unpublished data showing relative abundance of juvenile sDPS green sturgeon in the SFBDE (Sacramento River main channel north of Sherman Lake). There definitely appears to be a positive relationship between Age-1 juvenile green sturgeon abundance (CPUE in 2018 and 2020) following wet-type water years (2017 and 2019). Please let me know if you have additional questions.

Regards,
Marc

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From: Briard, Monique <Monique.Briard@icf.com>

Sent: Thursday, August 12, 2021 10:05 AM

To: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>; Unger, Sophie <Sophie.Unger@icf.com>

Cc: Huneycutt, Andrew@Wildlife <Andrew.Huneycutt@Wildlife.ca.gov>; Hendrick, Mike <Mike.Hendrick@icf.com>; Greenwood, Marin <Marin.Greenwood@icf.com>; Kilgour,

Morgan@Wildlife <Morgan.Kilgour@Wildlife.ca.gov>

Subject: RE: Sites green sturgeon questions

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Thank you, Marc for reaching out. Sophie is the ICF fish biologist who prepared portions of the Sites document that covered effects of the project on upstream (of the Delta) fishes. We were told during our calls this week with the CDFW team that there are concerns about some of our findings/conclusions regarding green sturgeon and low flow conditions in the Sacramento River, which we'd like to try to address.

Sophie, please call Marc to further the discussion.

Thanks,
Monique

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From: Beccio, Marc@Wildlife <Marc.Beccio@wildlife.ca.gov>
Sent: Thursday, August 12, 2021 9:17 AM
To: Unger, Sophie <Sophie.Unger@icf.com>
Cc: Huneycutt, Andrew@Wildlife <Andrew.Huneycutt@Wildlife.ca.gov>; Briard, Monique <Monique.Briard@icf.com>; Hendrick, Mike <Mike.Hendrick@icf.com>; Greenwood, Marin <Marin.Greenwood@icf.com>; Kilgour, Morgan@Wildlife <Morgan.Kilgour@Wildlife.ca.gov>
Subject: Sites green sturgeon questions

Hi Monique,

Drew forwarded me your email regarding questions you have regarding our concerns of potential impacts to sDPS green sturgeon from the Sites Reservoir project. Please send me your list of questions and I will address them.

Regards,
Marc

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