Mark West Creek Watershed Hydrologic Study Public Zoom Meeting Chat History

00:00:23   From Mary Olswang : Hello everyone:)

00:00:53   From Penny Sirota : Kevin - will you have a record of who is on the call?

00:01:52   From Sonoma RCD : Yes Penny I will have a record

00:04:11   From Jacob Newell : I'm in, had to use phone audio.

00:46:17   Matthew O'Connor:Puff Creek is Monan's Rill

00:56:16   Lynn Garric:audio quality is breaking up a little

00:56:20   Penny Sirota: Having trouble with sound here. Its bogging down.

00:56:35   Betty Andrews: same here

00:56:37   Tracy Daly: Yes, sound is degraded

00:56:50   Sonoma RCD: Ok hold on folks let me see what I can do

00:57:02   Matthew O'Connor:yes, lets hope the internet weather improves

01:01:37   Doug Bush: sounds better

01:01:38   derek acomb: yes!

01:01:38   Penny Sirota: Yes

01:18:28   Ray Krauss: You show annual water usage. How does seasonal use effect conditions; ie higher irrigation pumping during summer and early fall?

01:19:30   John Mack: what is effect of groundwater withdrawal on stream flow and riffle depth during key summer months july-sept?

01:20:17   Rick Rogers: slide 8: it appears that the model is overestimating flow volume, especially in spring/fall for Rancho site. What is an acceptable error in those simulated values?

01:21:22   Lynn Garric:what have you been able to determine about the canopy loss due to Tubbs Fire and loss of shade/temperature increase on the middle stretch. any more specific recommendations for vegetation restoration

01:21:44   Bruce Abelli-Amen: Any thoughts on strategic recharge projects in the upper watershed to enhance the hydrologic engine?

01:22:33   Bob Solecki: Regarding the lack of deep pools and shade that would benefit salmonids, is this due to anthropomorphic impacts or has the watershed always lacked these habitat characteristics?

01:22:46   Rob Pennington: Have you calculated errors for the only the low flow period?

01:23:29   Dan Worth Worth: Are the model input data available to people that request it? Specifically, stream flow and groundwater level data.

01:23:34   Ray Krauss: Do groundwater storage and flows reflect rock fracturing? For example, you show andesite as low storage, but it is known to be highly fracture in some areas.

01:24:56   Kit Barron: Are there any interventions that you can recommend to help shape the structure of the streambed so that it is more conducive to salmonid spawning/rearing (e.g., rock positioning to encourage refugia pools)? Or is this a situation where it is better to let nature take its course?

01:26:20   Ray Krauss: We do know that historically there were ample salmon. So what has change if conditions are the same today as there were historically?

01:27:04   Tim McCarthy-Smith: When you say "scour" a pool, why not take an excavator and DIG a pool every few hundred feet?

01:28:25   Sierra Cantor: Is dissolved oxygen data available for some reaches with flow and temperature data? In areas that meet minimum riffle depths, but are temperature limited, are the dissolved oxygen concentrations meeting water quality objectives for salmonids?

01:32:39   Ray Krauss: Effectiveness of rooftop rain capture and storage?

01:33:47   Penny Sirota: Pg 27 - Question about recharge enhancement - there are areas of historic seasonal vernal pools - several areas that have been drained - if these were revitalized - might it be an important recharge strategy?

01:37:25   Ray Krauss: #29 Flow replenishes more quickly depending on degree of fracturing of bedrock.

01:38:44   Ray Krauss: Again, doesn't reflect degree of fracturing.

01:41:35   Matthew O'Connor:Ray, as you know, fracture flow is difficult to characterize for modeling work; we can consider a sensitivity analysis to try to evaluate how that might change the representation in the simulation.

01:42:49   Ray Krauss: Matthew, fracture flow would make big difference it seems to me.

01:43:04   Valerie Zimmer: GW diversions on streamflow ~ 0.06 cfs. MANY groundwater wells are within 100m of the creek - even these close wells aren't having a big effect on summer baseflow? What is the primary explanation - because the conductivity is low? Because the baseflow is being driven by springs up the hill? Because the wells are deep and in a different layer than the stream bed?

01:43:19   Matthew O'Connor:Ray-It certainly could.

01:44:08   Penny Sirota: is groundwater pumping more impactful in the Upper Watershed where the "engine" is located?

01:44:38   Matthew O'Connor:Valerie-we are still looking at that question. There will be more on that before we are done.

01:45:11   Rick Rogers: was the diversion data captured from eWRIMS? if so, were surface diversion estimates conservative enough to account for illegal/unregistered diversions (a problem seen during the drought emergency order in GVC)?

01:47:11   Matthew O'Connor:Kit-Streambed conditions have a major influence on pool formation and persistence; in this system I think that intervention potential exists, but is more limited than in some other watersheds

01:49:37   Matthew O'Connor:Rick Rogers-diversion data includes the emergency order data base; we aren't accounting for illegal unreported diversions; we do account for some illegal water use for cannabis

01:50:55   Kahtarina Kljavin: Is there concern that compost applications on grasslands would alter the soil composition and encourage annual invasive species or is is mostly annual invasive grasses anyways?

01:52:08   Ray Krauss: #38 Not Alpine too?

01:52:53   Penny Sirota: What if the areas of the watershed that are already characterized as being infiltration geology were enhanced? (Connected to earlier question having to do with vernal pools) or other infiltration projects where the soils are most receptive. How can we maximize the positive impact of the upper water shed?

01:54:22   Ray Krauss: Why would you need permission just to model?

01:56:33   Sonoma RCD: Ray - During our outreach to landowners with ponds for the modeling, some landowners specifically stated that they did not want to be modeled or be apart of the study.

01:57:15   Ray Krauss: Shouldn't make any difference. All public information.

01:57:30   Ryan Ferrell: Kahtarina- The compost application would in theory be 1/4" based on the modeling by Flint et al. 2018 "increasing soil organic carbon... strictly speaking it would not change the soil composition of the soil except to increase organic matter for some time and therefore water holding capacity. As far as introducing invasive species, depends on the source of the compost. A lot of the grasslands are currently annual exotics already.

01:57:51   Sonoma RCD: Thanks Ryan

01:58:03   Valerie Quinto: Ray, we didn't want to model scenarios that we knew to be impossible due to lack of landowner interest.

01:59:01   Ray Krauss: They won't own it forever.

02:00:18   Elizabeth Ruiz: How would the gain in cfs from summer flow releases translate into riffle depths?

02:00:35   Elizabeth Ruiz: /how much depth would be gained by the pond releases?

02:01:00   Kit Barron: Would it be possible to save the chat history and share out w/ the rest of the post-presentation materials? I had to reboot and can no longer see the chat history, where a lot of the Q&A took place. thanks!

02:01:27   Sonoma RCD: Kit - Yes the chat history will be included with the video recording

02:01:34   Kit Barron: thanks!

02:04:17   Jennifer Joell: The best recharge areas seem to be in the upper watershed, mostly in the heavily forested areas. did you examine loss of those forests due to vineyard conversions or climate change?

02:08:14   Kimberly Robertson: There is a fade out at the end of many of the statements. The sound starts strong and then I miss the last several words

02:08:48   Jennifer Joell: Please address the importance of the Porter Creek watershed. there is significant rechage area up there. Also your maps show improvement to ripple depths in Mark west creek below the junction of Porter Creek.

02:17:13   Penny Sirota: Do we know about the affect of prescribed burns as a management action - does it have more of an effect on evapotranspiration and infiltration then just thinning work?

02:21:37   Matthew O'Connor:Penny-we don't have any fire effect simulation other than the fuel management scenario that reduces leaf area index. prescribed fire would do something similar

02:26:55   Penny Sirota: Matt - Monan's Rill is interested in grassland treatment up on our upper meadow - or even Emerald Valley - keep it in mind if its useful for the model. Let me know.

02:28:51   Valerie Zimmer: How easy is it to run a simulation in this model? Does one need to be a full MIKESHE user? Hire OEI?

02:29:42   Ray Krauss: Degree of bedrock factoring not known/considered. Seems that the more bedrock fracturing is present, the more favorable all the modeling outcomes.

02:32:28   Ray Krauss: THANK YOU VERY MUCH. OUTSTANDING!!!

02:32:40   Harriet Buckwalter: Thank you!!!

02:32:41   Sara Press: Thank you!

02:32:47   Penny Sirota: Thank you all! This is going to be a huge help and guide for us going into the future!!!

02:32:48   Rob Pennington: Thank you!

02:32:49   Sierra Cantor: thank you!

02:32:57   Shannon Weese: Thank you!

02:32:57   Jennifer Joell: Thank you!!! Very informative

02:32:59   Bryan McFadin: Great job Jeremy, Matt, Kevin, and crew! Thanks you

02:32:59   Valerie Zimmer: Excellent, thank you!

02:33:01   Sarah Nossaman: Thank you that was fantastic

02:33:02   Doug Bush: Thank you!

02:33:03   Joseph Dillon: thanks