

Governor's Upper Yellowstone River Task Force
Meeting Transcription
July 15th, 2003
Yellowstone Inn
Meeting began at 7:00 p.m.

I. Introductions

Members Present:

John Bailey, Chair
 Roy Aserlind
 Andy Dana
 Michelle Goodwine

Dave Haug
 Jerry O'Hair
 Brant Oswald
 Ed Schilling

Rod Siring
 Bob Wiltshire
 Jim Woodhull

Jeff Blend, proxy, DEQ Ex-Officio
 Annette Compton, proxy, MDT Ex-Officio
 Laurence Siroky, DNRC Ex-Officio

Vicki Sullivan, proxy, Corps Ex-Officio
 Joel Tohtz, FWP Ex-Officio

Others Present:

Liz Galli-Noble, Coordinator
 Kelly Wade, Secretary
 Jacqueline Isaly, Assistant
 Tom Arrandale
 Jim Barrett
 Jeff Blend
 Scott Bosse
 Chuck Dalby
 Colleen Horihan

Karl Christians
 Steve Golnar
 Tom Hallin
 Steve Holnbeck
 Jodi Isaly
 Bill Moser
 Mike Lesnick
 Chuck Parrett
 Tom Pick

Jim Robinson
 Jackie Robbins
 Daryl Smith
 Randy Taylor
 Stan Todd
 Michael Wendland
 Sarah Carlson

Approximately five to 10 additional individuals attended this meeting, but did not sign in; therefore they are not listed above.

II. Prior Meeting Minutes

John Bailey: The first item on the agenda is the review of the previous minutes, from July 8th, a week ago.

Michelle Goodwine: I have an addendum. I'd like to add "per acre" to my comments on page 10. The way it reads right now it is just \$10,000 and \$20,000. It appears in a couple of thoughts. It should be "\$10,000 to 20,000 dollars per acre," and also "1,000 to 2,000 dollars per acre."

Andy Dana: I have a couple of corrections to some of my comments too.

Liz Galli-Noble: I'm a little ahead of Andy here, he gave me these corrections via e-mail the other day and I've already corrected them in your copies.

Michelle Goodwine moved to approve the July 8, 2003 minutes with corrections. Brant Oswald seconded the motion. The motion passed unanimously.

III. Financial Updates

EXPENDED GRANTS			
Grant Name	Completed	Amount	Study Component
DNRC Watershed Planning Assistance Grant	6/30/99	2,100.00	Physical Features Inventory
DNRC HB223 Grant	7/30/99	10,000.00	Aerial photography
DNRC Riparian/Wetlands Educational Grant	6/30/00	960.99	<i>Hydrologic Response to the 1988 Fires Workshop</i>
DEQ 319 Grant (1 st)	9/30/00	40,000.00	Coordinator position

DNRC Watershed Planning Assistance Grant	1/31/01	10,000.00	Watershed Land Use Study
DEQ Start-Up Grant	6/26/01	49,138.00	Coordinator position, Admin secretary, additional cross-sections, operating exper
DNRC HB223	10/1/01	6,500.00	Riparian Trend Analysis
BLM Funding	10/26/01	10,000.00	Wildlife Study
DEQ 319 Grant (2 nd)	3/21/02	58,000.00	Coordinator position
DEQ 319 Grant (3 rd)	9/30/02	44,000.00	Coordinator position
EPA RGI Grant	12/20/02	30,000.00	Geomorphology study
CURRENT GRANTS			
Grant Name	Amount	Spent	Remaining Balance
DNRC RDGP Grant (expires 7/03)	299,940.00	288,621.63	11,318.37
DEQ 319 Grant (4 th) (expires 3/04)	122,200.00	69,816.27	52,383.73

Liz Galli-Noble: This summary has not changed since the last time I reported. And, as I cautioned you before, of the \$52,000+ shown remaining for the 319 Grant, Park Conservation District still has to take out approximately \$6,500 for administration fees. So we have about \$45,000 left, to date, for that source.

John Bailey: Any comments? Thank you.

Laurence Siroky had asked us several meetings ago to allow the DNRC to present the new floodplain maps that were created with the help of the Task Force. The work was done by the US Geological Survey and also the US Army Corps of Engineers. Liz made copies of these floodplain maps for every Task Force member.

John Bailey: Where else are they?

Liz Galli-Noble: There is a set in the back of the room for the public to look at. I also had the maps scanned, so if people want CDs—within about a week or two—they can get a hold of me at the Task Force office and I can give them CDs. They are way too expensive to print additional copies.

John Bailey: And the County has a set, correct?

Liz Galli-Noble: The DNRC has a set, and the County and City both have a set through their Task Force representatives here tonight.

John Bailey: For any of you who want access to them, there are at least this many that are on the table floating around. I just want to make it clear that there are quite a few, so if people want to go see them, that they are available. The Task Force has no responsibility in the adoption of these maps. We created the maps, and as Laurence will now explain the process that they will go through in order to be adopted. But I want to make it clear that the Task Force is not doing anything to legally set the location of the actual flood plains; that is the role of other agencies; we have no role in that. I'd like to now turn the meeting over to Laurence Siroky, who will take you through the presentation of the 100-year Floodplain Maps.

Laurence Siroky: My name is Laurence Siroky, again. I'm with the Montana Department of Natural Resources and Conservation. Tonight, with us in making this presentation is Chuck Parrett with the USGS, and Colleen Horihan from the Corps of Engineers, and Karl Christians with my floodplain program with the State of Montana DNRC. Tonight we'll be talking about the purpose of the study and floodplain management; but we won't go through the engineering process of coming up with floodplain maps, since that has been done at least twice during previous Task Force meetings. If you've got questions in those areas, we'll try to answer them. Then we'll talk about our map adoption process, which is really separate from the process of the Upper Yellowstone Task Force, as John Bailey has said. When the grant application was put together for the Upper Yellowstone Task Force, I felt that it was very important for the Task Force, as well as the City and County, to know where the flood plains are in this area. Undoubtedly, anything that's done effects those floodplain areas. So that was a centerpiece of the grant that was granted by the Legislature for the Task Force to continue. So, it really serves two purposes. One is to help the Task Force in its efforts, but also for the DNRC, and the City and County regulation of flood plains—considering that part of our procedure is that we have to first have the maps to identify flood plains and floodways. This meeting tonight is really a preview to a public meeting that we normally have

to go over the Draft Floodplain Maps. What we like to do is get those maps out to landowners to take a look at them. Oftentimes they see something that needs to be looked at more carefully by the engineers in the floodplain analysis, something that might need to be corrected before we get to a formal hearing. And as Karl will explain, the State of Montana is responsible for adopting the floodplain maps. Once those are adopted formally, we go through an administrative rule process for doing that, and that's a very formal process. So we like to have public meetings prior to that formal process, and try to get questions answered and get a lot of that resolved before we get to the formal process. It makes that whole process much easier and much shorter. Like I said, tonight is a preview of that public meeting. We're looking at public meetings, or a public meeting for both the City and the County, about the week of August 25th. That's, of course, with everybody being able to make that schedule to put on those maps. The County, my staff, the Corps of Engineers, and the USGS will have their engineers and the mapmakers there to answer questions. With that, I'll turn it over to Karl Christians. Karl is my Floodplain Program Manager, for the State of Montana. As you know, the Floodplain Regulations are actually enforced by the local governments—the cities and counties. The State has a responsibility first to adopt the maps, and then the counties and cities have six months to adopt the map and ordinances to enforce those maps. So Karl will explain the terminology; we've talked about floodway and flood plains, what that really means. Karl can tell you those things a lot better than I can.

Karl Christians: Thanks Laurence. I have a handout (see *Attachment A*), but I didn't bring enough copies for everyone. As Laurence mentioned, I manage the State Floodplain Management Program. I've been doing this for about 12 years, and I like to hold this kind of process because I like to involve the public. I want all the property owners and everybody associated with this immediate flood plain to have a chance to look at these preliminary maps—as long as everybody understands that they are *preliminary*—so they're included in the process. The old process used to be that we'd give you a map, give you 30 days to adopt it or else there would be some major repercussions. We are holding this meeting as just kind of a preview for the Task Force. Just so everybody understands.

I'm going to touch on the terminology of what we use in the world of floodplain management. If you flip to the second page of the handout, it talks about, what is the 100-year flood? That's the flood that we address, that's what you'll be looking at on these maps, is the 100-year flood. It is a flood that has a one percent chance of occurring in any given year. It does not mean that because we had one in 1997, we won't see another one until 2097. That's a misnomer. The 100-year flood has a one percent chance, in any given year, of occurring. So, the *flood plain* is basically the area of land that's under water during that 100-year flood event. Within that flood plain, we have two zones that we use to regulate. One is the *floodway*, and essentially that is the channel of the watercourse, and the adjacent land that is reserved in order to discharge that base flood (the 100-year flood) without cumulatively increasing the water surface more than half a foot. So, we try to limit the amount of encroachment onto that flood plain, so we don't raise that flood more than half a foot. That center portion is the floodway. It also contains, according to our state rules, areas that have velocities of three feet per second or higher, or depths of three feet or deeper. Those are the higher hazard areas, so we map that into the floodway, and include that in the floodway, and try to limit development in those areas. Then, on the outside of that flood plain, we have a *floodway fringe*. At the state level, we do allow development, as long as it meets certain criteria. Now, as Laurence mentioned, flood plains are managed at the local level and we are seeing more and more communities strengthen their Floodplain Regulations to even minimize or reduce the amount of development in the flood fringe, because they're experiencing major development even if it is addressed accordingly. Just keep in mind that local governments can adopt more stringent regulations than what we at the State mandate. Any questions on the terminology, just so everybody's clear?

On the next page, this is kind of an interesting bit of information for those of you who understand statistics, which I don't. That's why I have this chart here. In the Upper Yellowstone you experienced close to a theoretical 100-year flood three times in the last 30 years. In most areas, they rarely see it. There are some areas that have yet to see one. But just in general, what are the odds because of the statistics? Can you picture a 30-year period that these properties in the flood plain, it has a 26 percent chance of being flooded. Whereas, that same piece of property has a five percent chance of burning. So the odds are quite a bit higher that it will be flooded if it's located in the flood hazard area. Just a little bit of information there.

Now, one thing I wanted to touch on, that I've experienced, not only in this state but nationwide, is the focus on the importance of flood plains. It used to be "fill them in; dike them off; don't worry about it; keep the river flowing downriver." We've all heard that. We're realizing that those flood plains have a lot of beneficial factors. I'm not going to read through all of these on the handout, but flood plains are pretty essential to a river system to allow that water to flood, to be stored, to lower the flood heights, improve water quality, wildlife, etc. We're seeing this trend nationwide, not only here in Montana. We're beginning to realize that flood plains are very important, and how we maintain the importance and benefits of those flood plains begins with the proper management of the flood plains. That takes me to kind of the history. Back in 1968, the federal government developed the National Flood Insurance Program. That was a mechanism where homeowners could buy flood insurance if their community was enrolled in the National Flood Insurance Program. Park County and Livingston both are presently enrolled; they enrolled in the early 1980s. In order for the government to provide flood insurance, the local governments agreed that they would manage future development in the flood plains. In 1968, was the Federal Act, in 1973 our legislature developed a state law, the Floodplain and Floodway Management Act. We were just talking about this earlier, those folks at that time had some pretty good foresight because our state law is probably one of the better ones in the nation to this day, and we haven't really touched it since 1973. It's been a good program, it's been pretty fair to the majority of people, and it's benefited the taxpayers greatly because of it, because of that floodplain management. Laurence mentioned also that our department is tasked with identifying all flood hazards of each and every drainway in this state. And we know there are a lot of miles of flood plains and floodways, and at the rate we're going we're not getting too many mapped because of that, of the cost but we're working on it. Back to floodplain management. To keep it simple, I look at it as it's the common sense rule. No water is at this elevation, or houses. It's pretty simple, common sense. Like Laurence said, it's not that easy to administer, but it's fair. I'm not going to keep going on because I could speak for hours on it. Are there any questions so far?

The next phase of this meeting is the process of the floodplain study. How did we come up with these maps? I'm going to turn this over to Chuck Parrett with the USGS first, and he is going to explain how he did his portion of the river. Then after that, I'm going to turn it over to Colleen Horihan with the Corps, who's going to explain how she did her portion of the river. After that, I'll get up and talk for a little bit, and we'll take a break and look at the maps, discuss, comments, and then we'll finalize our talk.

Chuck Parrett: Thank you, Karl. I made 10 copies of these handouts (see Attachment B), so maybe people can share. What I want to talk about is the USGS portion of the Floodplain Study, and that basically covers the area from Carter's Bridge, just above Livingston, upstream to Gardiner. That's a total stream reach of 50+ miles. When the USGS prepared our map segments, we prepared them in 1:12,000-scale maps, and it took seven map segments for us to be able to put all that together. Those seven segments are the ones that are spread out in the back of the room. So if you've had a chance to look at those, you can see pretty much the USGS map portions. Unfortunately, what you see are just the maps and there is no legend or any kind of identification on those maps that tell you what the different color codes are. The first thing I want to do is let you know that what you see on those maps that is colored in yellow is just a little bit of outer flood plain that represents the 500-year flood. Karl talked in terms of floodplain regulation as applied to the 100-year flood, but we know that bigger floods can occur, so just as an indication, we've also shown the 500-year flood limits for a portion of the floodplain study that we did. The other color code there is a blue and a green. I think the inner area is the green area; the inner area, the smaller area, represents the floodway that Karl talked about. That's where floodplain restrictions tend to be much more restrictive. The blue area is 100-year flood limits. Okay, so there are 3 different colors actually on the USGS maps, or on most of those maps: yellow, blue, and green. 500-year flood is just there for illustrative purposes only, 100-year flood limits, and the floodway.

There are actually two different levels of detail that USGS used in our floodplain delineations. The first five map segments, that go from Carter's Bridge upstream to Point of Rocks Bridge, that's what we call a "more detailed floodplain study," and it's only for that area where we show all three different colors. From Point of Rocks Bridge upstream to Gardiner, we did what we call a "limited," lesser detailed floodplain study, and the only thing that's shown on those last two map segments will be the 100-year flood—no floodway, no 500-year flood. The other thing about the other reach from Point of Rocks Bridge up to Gardiner is that there are far fewer surveyed river cross-sections. The way that we do a floodplain study

is to take surveyed river cross-sections and apply a hydraulic step-back water computer model. The model that we chose to use is the same one that the Corps of Engineers used, it's a model called HEC-RAS. It happens to be developed by the Corps of Engineers. And the way the model works is that it starts downstream and works upstream, even though water comes downstream. There are several basic inputs for this computer model. We require surveyed river cross-sections, distances in between the cross-sections, and some other hydraulic parameters. With any computer model, we want to be somewhat certain that the model is working, and that it is verified. So what we chose to use as kind of a calibration for this delineation of the 100-year flood is, when we surveyed river cross-sections, and we surveyed about 140 of them from Carter's Bridge up to Gardiner, and at every cross-section where we could find high water marks from the 1996 or 1997 flood, we surveyed the high water marks. We used those surveyed high water marks as a calibration of our hydraulic model. It so happens that the 1996 and 1997 floods, as Karl indicated, both of those floods happened to be very close to a 100-year flood, so we knew our computer model (our stepback water model) was working when our calculated 100-year flood elevation at those cross-sections was fairly close to the surveyed high-water mark. In another part of the study area, from Carter's Bridge to Point of Rocks Bridge, we used about 100 cross-sections, and the cross-sections were spaced closer together. The closer the cross-sections are spaced together, the more reliability and faith we can have in the hydraulic model. Again, it's an indication of that lesser detailed study version from Point of Rocks Bridge up to Gardiner, I think we only had about 40 cross-sections, so they were spaced a lot farther apart. One other point, though, that I want to make about floodplain delineation is that what you see on the maps is an indication of the lateral extent of the flooding. But you need to keep in mind that the hydraulic model determines flood elevations at cross-sections, and those flood elevations are really what was used as a basis for showing those lateral limits of flooding. Obviously, the more cross-sections that we have and the closer together they are, the better our calculated water-surface elevations are going to be, and the more faith we can have in our maps.

I think the last point that I wanted to make about the USGS portion of the mapping is that when we first prepared those maps, together with some text describing how we did the maps, we furnished copies to the Task Force. We also furnished copies to some other technical reviewers, including the Corps of Engineers, and what we've learned from the technical reviewers thus far is that we need to make a couple of corrections on those maps. We found out from the Montana Department of Transportation, for example, they are busy designing a new bridge at Corwin Springs, and as a result of that new bridge design, they had surveyed their own cross-sections and done a little more detailed study in that Corwin Bridge area than we had with our limited number of cross-sections. So we've redone the hydraulics in that Corwin Bridge area. The flood elevations changed slightly, but I don't think it is going to have any effect on the lateral limits of flooding. But that is one correction that we need make to those maps. The second correction that we need make is that where we began the study, at Carter's Bridge, is where the Corps of Engineers ended their study, which started below Livingston. We want to be really careful to make sure that the calculated flood elevations that the Corps of Engineers came up with as their model worked its way upstream, at Carter's Bridge, matched what we used for starting elevations as our model proceeded upstream. We did that. Those elevations match fairly closely, but one thing that doesn't match exactly are the floodway limits, and we need to adjust our floodway limits slightly to correspond with the Corps of Engineers floodway limits. To this point, those are the only corrections that we know that we need make to our maps and our report. As Karl indicated, when we get through this public hearing process and folks have a chance to look at those maps, we may find other corrections. But to this point, I wanted you to be aware of those two corrections. With that, I think, unless there are any questions, that's all I have to say about the USGS portion of the floodplain study. Okay, why don't I turn it over to Colleen Horihan and she'll talk about the Corps of Engineers delineation.

Colleen Horihan: Thank you, Chuck. As Chuck said, my name is Colleen Horihan and I'm with the Corps of Engineers out of Omaha. And first off, I'd like to thank Chuck and Steve for being great to work with, we've been cooperating to make sure that our studies merge and that all the data is fluid through the area at Carter's Bridge. I'd also like to thank Chuck Dalby, Jim Robinson, and Laurence for helping us through this process. Second, I'd like to commend you and the Task Force. I can attest to what Karl said, and you are a great group for being **proactive** and trying to protect the natural value of the flood plain. I work with several groups in Omaha right now that are being **reactive**, where they have allowed too much development in the flood plain and they're trying to figure out what to do with that right now. So I commend you for your efforts here.

There are two maps that the Corps has produced. The colors are a little bit different, we used a little bit different platform in printing out the maps. Chuck said we both did use the same hydraulic model, the HEC-RAS Model, the stepback water model. Our study started down in Mission Creek, and it went up to Carter's Bridge, which you have 15 streams. We obtained surveys through the Livingston area from Allied Engineering in 1998, and then the USGS did the channel cross-sections from around Highway 89 downstream, and then the upstream end of Siebeck Island up to Carter's Bridge. We obtained the two-foot, that is for mapping in the Livingston area, from a contract that we had with a private contractor. One thing that I would like to point out about the discharges on the Yellowstone River is that the discharges for the 100-year events are very close together, especially for the 50-year event and the 100-year event. In this area, the 50-year event is approximately 35,500 cubic feet per second (cfs), where the 100-year flood event is 38,300 cfs; so they are very close in discharge. On our mapping, one thing I would like to point out that is different between our maps and the USGS maps, is that we did not plot the 500-year flood event. Our maps show the Montana requirements in green as the floodway, and then the blue area is the 100-year flood plain. We do have a hydraulic model for the 500-year flood event, but we did not have the funding to complete the 500-year flood event mapping.

The other thing that I would like to point out is, in the Livingston area, one of the reasons why you see the flooding behind the landform that sits close to the river, is that in order for an area to be mapped and be considered as a levee, it has to meet certain criteria. And in this case, we call this a "landform" because it does not meet the FEMA criteria for a levee. That's why you see water behind the landform area.

The last thing that I'd like to discuss is the floodway. The first thing that we did do with our hydraulic model is we ran the half-a-foot-rise floodway, and we delineated that. Then, what we did was we, at each cross-section, we determined areas that have the three-feet in depth from flooding, or if they had three feet per second in velocity. Then we lined the floodway to include those areas in the floodway. That's why, in many portions, the floodway is very wide. I guess I just want to point out too that the area that we did merge at Carter's Bridge, I think we matched within 5/100th of a foot in our water-surface elevations. I think that is about where we matched. So we did pretty good at where we matched in our model. So, Chuck and I worked together very extensively to try and make sure that we have a good profile through the Carter's Bridge area. Does anyone have any questions?

Karl Christians: I just want to reiterate, typically the process is that we do a flood study, and when we get to this stage, I like to hold a public informational meeting; involve the public, involve the landowners. Because a lot of times, we don't have the money to put into the study to get the level of detail that we have on these Upper Yellowstone maps. So I like the landowner to be able to come forward and tell us if we got something wrong here, or if "it didn't flood this much here," or "it floods more there." I like to get that public input because, we learn a lot from it; we learn a lot from the landowners. It's a vital process, I feel, in studying. Our track record in history has been excellent when we do it this way. The landowners and everybody associated and involved with this usually come to a pretty good agreement; versus us just kind of shoving a map down your throat and saying, "Here you go." Where we're at here is that we've got a preliminary map and we're going to shoot to hold our first public meeting on the draft maps in August. What I'd like to do is send a letter to all the landowners in this reach; that would be a pretty extensive mailing, but I feel it's pretty important. When you get a letter in the mail and it says your invited to provide comment on this flood study for your area, it smoothes things over really well. Typically, we can go from there to a final meeting. But if there are a lot of discrepancies or a lot of controversy, we like to take care of those comments, look at the maps again, if we have to make corrections here and there then we'll do that. And if there are major issues, we will hold a second public meeting. I've had to do that a few times. We just want to make sure that everybody agrees with what we've got on there. Once we have that second public meeting out of the way, then we go to a final map; but typically, we go straight to the final one, and that's the case here. Right now, let me ask if there are any questions I can answer quickly.

Stan Todd: Where are you going to hold that meeting?

Carl Christian: We'll hold that here in Livingston.

Stan Todd: Do you have a place?

Karl Christians: No, not yet. We haven't decided on that yet.

Mike Lesnick: When this process is all finished, will there be a series of benchmarks that engineers and surveyors can go to and know that they're reading the same number that's published on the map?

Karl Christians: I want to say "yes," but I am going to defer to Chuck. Do we know, are there established benchmarks?

Chuck Parrett: Yes, we tried to identify them on the maps that we made, the benchmarks that we used to come up with elevation control, and all of those were shown on the maps.

Karl Christians: And a list of those benchmarks will be included in the final report?

Colleen Horihan: We will need to do that, those are not on our maps currently.

Karl Christians: Okay, what I would like to do know is take a break and have everybody get up and take a look at the maps. Landowners, find your spot, look at it. Good, bad, ugly, or indifferent, don't hold back, let us know. That's what this meeting is about. You can't offend us, we have thick skin. We have 10 minutes.

10-minute break.

Karl Christians: Hopefully everyone had a chance to look at any areas of concern that they had. Before we go into questions and answers, let me just kind of zip through our map adoption process. Once we get through our first or second public meeting, and get to a final map, everybody's happy, then we go to what we call a final "Contest Case Hearing" on the final maps. That's just our legal process, where it makes it official for the legal aspect of it. Once we hold that final Contest Case Hearing, the Hearings Examiner will make a recommendation to our Director, whether or not to approve or adopt these flood maps. If it is adopted, then it will be incorporated into the Park County Floodplain Management Program, and the Livingston Floodplain Program, and then it will be submitted to FEMA for conversion of their maps. That last process is a really slow process. I like to have a map we can work with before we go to that phase. That's kind of the adoption process; the hard part is where we are at right now, working through issues, addressing questions and answers as they come up. With that, any questions on the preliminary floodplain maps?

Scott Bosse: Karl, do you have a set of aerial photos from the 1996 and 1997 floods to compare these maps too?

Karl Christians: Yes, we do.

Scott Bosse: Did they jive pretty well?

Karl Christians: I have not personally taken the time to compare them. I guess I could defer that, before I give my answer as to what I think, to Chuck or Colleen.

Colleen Horihan: I do not have that.

Steve Holnbeck (USGS): I'll take a shot at it. We have not rigorously compared those flood limits everywhere; but where we have, there seems to be pretty good agreement. We wouldn't expect perfect agreement, because cross-sections topography has changed somewhat since the last big flood in 1997. But I think what we see for the most part is pretty good agreement.

Chuck Parrett: Well, that's true, what Steve just said. This is always an interesting argument that comes up with flood photographs, is that very rarely do flood photographs happen to be taken at the time of peak flooding. There is also a little bit of difference in peak discharge shown on a photo and what the actual peak discharge is, so that's also a bit of a problem.

Karl Christians: Just an add-on to that, the 1996 flood, if memory serves me correctly, was 37,000 cfs, and 1997 flood event was 38,000 cfs, but the 1997 flood actually had a lower stage (lower flood height) than the 1996 flood with the smaller flow, and the reason is the channel was scoured out quite a bit. So, not very often do we get to take photos back to back like that of a major flood. There could be some areas of discrepancies, there could be some areas that are flooding that are not shown on the map because of a debris jam, or some different circumstances, a house floating by, or something to that effect. They may not always jive.

Bill Moser: In comparing the model to the flood, what kind of means analysis did you have in terms of correlation?

Karl Christians: I'll defer that too.

Chuck Parrett: What we did was to try to ensure that at most cross-sections our calculated 100-year flood was close, within a few tenths, of the surveyed high-water mark that we got from the 1996 and 1997 floods. Not in all cases could we make the calibration that close, but in some locations where high-water marks were measured considerably higher or considerably lower, high water marks also tend not to be perfect, and so there were some instances where there was a fairly good deviation from the water marks from the calculated flood elevations, but at most cross-sections, there was really good correspondence, within a few tenths of a foot.

Bob Wiltshire: When was the last time the 100-year flood plain was mapped?

Karl Christians: The last time the 100-year flood plain was mapped was basically the only time it was mapped in detailed methodology, in 1974 by the Corps of Engineers for the City of Livingston; and it actually extended upstream a few miles, downstream to the Shields River. Then, part of that was just approximated flood plains by FEMA.

Bob Wiltshire: Then I have a question, and this is not for you guys, but I'm an idiot about all this stuff. Maybe Ed, what's the County using for a 100-year flood plain right now?

Ed Schilling: That FEMA map that he was just talking about, that they estimated. I know up Paradise Valley that that is the one they use.

Bob Wiltshire: Another question. Correct me if I'm wrong, but every time we have a flood event, some of this changes slightly?

Karl Christians: Yes.

Bob Wiltshire: But particularly the floodway seems to, the river will shift from one channel to another?

Karl Christians: Yes, it can change. On a river system like this, it could be minor or major. Since this river channel is, and correct me if I'm wrong, relatively confined into a valley, your overall flood plain is not going to change a lot. The floodway may shift a little this way or that way, depending on what the channel has done, how far it has moved. As far as elevations, it could change. The only way to find out for sure is to go through and do new cross-sections, new channel cross-sections, rework the hydraulics on it, and compare the new to the old. Any other questions? Feel free, this is the time.

Steve Golnar: This is relating to the landform, the Livingston levee. I know there's a Section 205 Study being done by the Corps, which follows up on the information that is collected here from the flood plain and the Section 205. I'm curious, I'm not sure what the answer is, what type of information will that yield relating to ways to try to control flooding events in the future?

Colleen Horihan: The Corps is looking at the Section 205 right now, and we hope that the study will be completed in an October 2003 timeframe. What we will be looking at, based off of these elevations, are structural and non-structural type methods to control flooding. The main structural type project that we

will be looking at is trying to make the landform a levee, which would then make it meet the requirements by the State, FEMA, and the Corps. In other words, you certify it. Really, the best person to talk to is Dick Taylor, given that he is the Section 205 Project Manager for the Corps, and I can give you his phone number, but you probably have it.

Karl Christians: Just to add on to that, the Corps, as it's doing that 205 study, will look at a lot of different alternatives. We're going through one at Glendive right now and looking at all kinds of different alternatives to see which one is the most cost beneficial to the citizens of Glendive. Other methods, if there are other alternatives, look at what's most beneficial to the whole system, to the natural floodplain system. Spell them all out, puts a dollar figure to it, and then it's a decision that the City makes from there.

Laurence Siroky: I guess to add to that, Colleen and I were talking about possibly adding a public meeting to present information in that 205 study that we might have; get that information out so people can see it.

Michelle Goodwine: If there is a LOMA, Letter of Map Amendment, already in place, will that continue to remain accepted on the new maps?

Karl Christians: Yes. That will remain in place if that Map Amendment still holds true to the new map. If the new flood elevation is here, and the old flood elevation is down below, and that house was amended to be out of the flood plain based on the lower flood plain, then they'll compare it to the new flood plain. If it's below, it's no. If it's above, it stays remaining. Okay? The majority of them probably, Michelle, will, knowing this system, will probably stay effective.

Joel Tohtz: During this presentation, it was mentioned that there was a slight discrepancy between the modeling of flood surface elevations at Carter's Bridge, where the Corps left off and where USGS picked up.

Carl Christian: 5/1000ths...

Joel Tohtz: And the adjustment is going to be made to the Corps model, to match the Corps? Is that correct?

Chuck Parrett: In terms of flood elevation, I think we matched really closely, and so there is not a discrepancy there. There is a slight discrepancy in the floodway width, where the boundaries of the floodway are. The reason for that is we started our study a little bit earlier than the Corps, because these things work upstream, we had to have a starting floodway width at Carter's Bridge. And we got a preliminary figure from the Corps, but when they did their floodplain study, and their things through a little more detail, they ended up adjusting that slightly, so we need to adjust ours to match.

Joel Tohtz: My other question isn't a floodway question, but a lot of houses in Livingston are sitting in the floodway right now. I have several questions about this, but I guess it comes down to this. Have they always been in the floodway?

Karl Christians: I haven't looked at the old 1974 Corps of Engineers maps to refresh my memory. I'm going to say that they probably are. That was a 1974 study, based on quite a bit higher flow, about 43,600 cfs, I believe.

Joel Tohtz: Will that have real meaning for the City of Livingston?

Karl Christians: Yes. I think it will.

Scott Bosse: I assume this is available digitally, or will be soon, the new floodplain maps?

Karl Christians: When we go to our public meeting, I'm going to have them scanned in and accessible off our website.

Scott Bosse: The reason I ask that is that I know that the old maps are available in digital form. Did you guys happen to overlay these with the old maps to see if there are any major discrepancies?

Karl Christians: No. The old maps are just approximated.

Roy Aserlind: I think a couple of times in the discussion it has come up that there are houses in the floodway. Now, what can an individual homeowner in the floodway do to preclude serious damage to his or her house, without getting into the river system?

Karl Christians: To be straightforward, the first and foremost and best thing is to relocate. Number two is to elevate it, elevate the structure. Number three is buy flood insurance.

Roy Aserlind: That's very reassuring.

Steve Golnar: My question is pretty similar, it has to do with development restrictions that we had identified earlier, they are more restrictive in the floodway than the flood plain. Can you summarize what the development, particularly for new development, what are the restrictions in the floodway versus the floodplain?

Karl Christians: Restrictions in a floodway are just that, pretty restrictive; basically no new construction, no new houses, no new structures, no fill. As far as substantial improvements, which mean, if you have a \$100,000 house and you want to put \$49,000 into improvements, no problem. If you want to put \$51,000 of improvements into it, it's not allowed, according to State regulations. It's pretty restrictive, and the reason is, is that's where the majority of the damage occurs. That was the whole purpose of floodplain management years ago, was to break that cycle of people getting flooded out, damaged, houses floating away, taxpayers paying to put it back in the floodway. That's a lesson we've learned across the nation, worldwide. It's a hard one to swallow, and it's one that I hate to have to enforce, but that's why hopefully the 205 Report will come up with something feasible.

Steve Golnar: One last question. The restrictions on development in the floodway in particular, are those located in State statute?

Karl Christians: Yes. Statute: title #76, chapter 5, section 4; or Rules: #36, chapter 15, subchapter 6. You may visit our website for more information: www.dnrc.state.mt.us

Bob Wiltshire: You eluded a few minutes ago to the 205 studies that are being done in Glendive currently. Listening to, as I understood what you were saying, they are further along in this process than what we are right now, and I'm wondering if you could tell us what some of the possible scenarios are that they are looking at there.

Karl Christians: Sure. It's been years since I've looked at it, so I'm shooting from the hip here. Some of the proposed alternatives are: Alternative #1: rebuild existing levee, raise it, which will cost \$12 million. Essentially that's it, a simple levee raise. It has an impact on an upstream privately owned levee, so they have to, across stream, mitigate that, so that adds some cost. Another alternative is to provide a bridge to Interstate 90. If anybody is familiar with Glendive, as you're dropping down into Glendive, the Interstate actually crosses an old channel of the Yellowstone. They basically completely filled that channel in, except for a measly little six-foot culvert. Now, old photos show a healthy portion of that river during a flood event, going through there. Glendive has a little bit different scenario because it is an ice effected flood event that hammers them. So, it's actually higher than a freeflow flood event. But, nonetheless, that second alternative, put a bridge in, take the culvert out, put the bridge in and that would drop the flood elevations about four feet. So then, they would have to raise the levee a foot or two at the most. Another alternative also included the bridge on the old channel, in addition to widening the existing Interstate bridges over the Yellowstone, and offsetting the levee, land work quite a ways, relocating a pretty major trailer park, a number of buildings. Then another alternative is to relocate everybody. It varies from \$12 million to \$18 million. That's the time where public input is crucial, is give us your ideas, we'll brainstorm this thing, give us some ideas.

Mike Lesnick: Karl, when you say replace everybody, that means, in Glendive, that means a lot of commercial business as well as residential business, if I remember that area?

Karl Christians: Yes, you're right, Mike. In Glendive, there are 12 structures that are relatively new that the City let go in. The worst case scenario is that the big grocery store down there is 12 feet under water during that ice effected flood, on down to a mere three foot.

Scott Bosse: You said that Montana has one of the most restrictive floodplain laws on the books. Has anyone ever sued the State of Montana, saying that those development restrictions in the floodway constitute a takings?

Karl Christians: No, not in Montana. There's been cases across the nation, and in fact we just listened to a speech about this here a couple of months ago. The person was researching cases and nationwide, 26 cases and the plaintiffs didn't win any of them, because of health issues. Flood issues, flooding, is a threat to human life, and that's a big thing. And the other part is, and we're seeing this nationwide, if Roy builds his house in the flood plain, and he creates a tenth of a foot of a rise on my house, I can take him to court and win. There have been quite a few cases to that effect. Any negative impact can be taken to court.

Roy Aserlind: What about the construction of an Interstate, and it comes after I've built my home there, and it raises the water level two or three feet, would that be sueable?

Karl Christians: In that case, Roy, no, because the Interstate went in before any floodplain regulations came into play.

Bill Moser: The Task Force is considering a proposal that potentially would change the height of the river about four and a half feet minimum around the two islands at Livingston. Would that affect the as-built or the as-printed floodway, if you dropped four and a half feet? Is that going to, a year from now, change what the floodway would be through Livingston?

Karl Christians: So, they're looking at building around the islands?

John Bailey: We're making a recommendation, that's the only power we have. Someone would have to fulfill that recommendation for what he is saying to happen. Our only authority is to make recommendations. We're recommending to open up the neck on Ninth Street Island to even the flows on the two channels.

Karl Christians: Oh, okay. Right at Roy's house? Yes, that could change the floodway, and if that was the case, as part of that project's approval, we would have to revise the maps, revise the floodways. Before that would be approved, we would have to look at what the impacts would be. Does it have an impact on anybody? That would have to be looked at before it would be approved.

John Bailey: For people who have looked at the map of Livingston, I think you realize there are going to be a lot of meetings, and I'm glad the City's having them and not the Task Force. But I'd certainly recommend that all of you let your friends know what these maps show, and if you've got concerns, start talking to the City or County. They're talking about meetings in late August, and if you feel that there needs to be more input, I think you need to be telling the people and getting more meetings set, getting dialogues going. The dialogue is not taking place here, we have no authority on setting the floodplain regulations. But I think there are big problems in Livingston that you can see, and you may find others, and if you get enough discussion going, I think that you can find that all people will be listening, and maybe some areas are going to need a lot of study to try to solve. It looks to me like the City is going to be busy; I feel sorry for Steve, because I think his phone is going to be off the hook for the next six weeks or longer. I see some real ramifications here. I think it also shows that there is a Task Force, there are major problems, and they are going to take some creative thinking. Thank you all for a very interesting presentation and discussion. We will now move on to other meeting business.

IV. Other Task Force Business

Ed Schilling: Seeing how these meetings usually go until 10:00, 10:30, 11:00, I was just wondering how many of the Task Force members would like to start maybe a half hour earlier, so we get out of here a little earlier? I don't know if that causes people travel time, chores, dinner, whatever, but that was just my idea. If everybody is happy at 7:00, I can live with it. I guess I would like to see it moved up a half hour just to get out of here a little earlier, but if that's a problem for everybody else, I don't care.

John Bailey: He also said to me earlier that, if we moved it a half hour earlier, he'd like to end at 9:30, because I have been cutting them off at 10:00.

Bob Wiltshire: Just purely personal, I would have trouble making it a half an hour earlier, but if it suits everybody else better, that's okay.

Ed Schilling: I talked to Jerry and a half hour earlier would interfere with his getting his things done, so we're just going to leave it. Sorry to even waste your time.

John Bailey: Well, that's fine. I think it's important that, if you've got issues, bring them up.

V. Task Force Recommendations

John Bailey: There are new faces here tonight, so I am going to briefly explain our recommendation process; in this process, we have two steps. In Step 1 is a general discussion session. At first, Task Force members are allowed to speak. We also are developing recommendations in this first step. We let the Task Force speak, and then we open it up to the public. If you've been to some previous meetings, it's been somewhat loose, depending on the topic. We then move to Step 2. In Step 2, only the voting members are allowed to speak, and in that Step 2, I will restate the proposed recommendation and ask the Task Force for final concerns and questions relating to the recommendation, and then I will ask if there is consensus. If there is consensus, that recommendation is approved, pending Step 3. If it does not reach consensus, we will then move back into Step 1, have a general discussion and see if there are any alternates that we can accept to move that recommendation forward. Step 3 happens at the end of the process, and once we move to Step 3, if the public wants to have any say on any of the recommendations, they have to send it to the Task Force in writing. There will not be an open discussion once we move to Step 3. In Step 3,

"...at its last meetings during which the Task Force finalizes the complete set of recommendations to be forwarded to the Governor, Task Force Members may not propose new recommendations but may propose modifications, amendments, or deletion of any of the previously adopted recommendations in Step 2 for any reason, including but not limited to:

To address concerns expressed by a Task Force Member's constituency or the public about the original recommendation;

To eliminate potential conflicts between recommendations;

To delete redundant or duplicative recommendations;

To integrate scientific studies and data more efficiently into the recommendations; or

To correct clerical, typographic, transcription, grammatical, or rhetorical errors."

We are now open to the Task Force for further recommendations. We had a couple of recommendations left at the last meeting, and one Task Force member asked if it could be held for another meeting because they wanted to talk to people. Is that the one up?

Liz Galli-Noble: This one was tabled until this meeting.

#1. Proposed Recommendation, tabled at July 8, 2003 meeting:

"Propose a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes, and important riparian habitats along the Yellowstone River. Establish a representative Citizens' Advisory Council to develop criteria, to recommend expenditures, and to facilitate approval of projects funded by public monies."

John Bailey: It's open to the Task Force for comments on this. Jerry, do you have comments?

Jerry O'Hair: Due to the time of year, I didn't get to talk with a lot of people, but I did talk to a few, and I guess there was not a great big objection to it. But as you can guess, they were overwhelming in favor of a big tax increase, so that's what you get from most. I think it covers a large scope and so it's not too restrictive. But the bond issue was an issue that most people just couldn't live with. That's about all I have to comment on it.

John Bailey: But can you live with this recommendation, or is that bond issue a problem? I'm looking for clarification on what you just said.

Jerry O'Hair: Well, I think that anything that raises taxes is an issue and I'm going to go with the fact that I would be willing to bring it up to a vote of the people and let them decide. But I'm not very positive in this recommendation and seeing it materialize.

Laurence Siroky: Just a thought I had in balancing a bond issue. I know in Lewis and Clark County they can pass an emergency levy, I think it is up to three mills for flood work or flood response, and we get a few of those every year. I guess you balance that against some proactive kind of activities. Then you have to see which is going to be cheaper.

John Bailey: Other comments, anyone? Are we ready to go to Step 2 on this? Okay, we'll move to Step 2, and I'll read this again, proposed recommendation, "Propose a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes, and important riparian habitats along the Yellowstone River. Establish a representative Citizens' Advisory Council to develop criteria, to recommend expenditures, and to facilitate approval of projects funded by public monies." So, Task Force, are there any final concerns or questions relating to this recommendation?

Jim Robinson: Just a point of clarification. This Recommendation is aimed at the County, and this Recommendation is going to the Governor, is that correct?

John Bailey: Correct.

Jim Robinson: So it will funnel back from the Governor's office to be seen again?

John Bailey: Well, maybe it won't be sent by the Governor's office. Maybe people in the community will try to convince the County to bring it up. All we can do is make Recommendations. Whether anything happens with them, I think is determined by whether or not there is a large group of the public, on any of our Recommendations, that tries to get people who would be able to do that to move them forward.

Jerry O'Hair: I really can't favor this proposal, but I will stand aside on it.

John Bailey: Well, I haven't called for that yet, but that's fine. Are we in agreement on this? Jerry, you're a stand-aside. Okay, this recommendation reaches consensus.

Recommendation Passed by Consensus

"Propose a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes, and important riparian habitats along the Yellowstone River. Establish a representative Citizens' Advisory Council to develop criteria, to recommend expenditures, and to facilitate approval of projects funded by public monies."

Andy Dana: John, can I propose a follow up to that, maybe to address Jim's concern, because it is a concern that I have too.

John Bailey: Wait. We're back in Step 1, please.

Andy Dana: And this is a recommendation that would be targeted toward the Governor, and that would be:

#2. Proposed Recommendation by Andy Dana:

“Establish a fund with the State of Montana to match, on a dollar per dollar basis, all projects that have been funded by the Citizens’ Advisory Council pursuant to a Park County Bond Issue.”

This is also addressed toward leveraging any local dollars that are committed toward the health of the Yellowstone River by finding, creating a source at a broader, statewide level, recognizing that there are more than just local interests involved.

Laurence Siroky: I guess in support of that recommendation, there are right now FEMA programs that fund at 75 percent projects that mitigate flood damages that have had multiple claims on flood insurance.

John Bailey: But they wouldn’t do scenic views, and whatever that the bond issue could allow?

Laurence Siroky: I guess where the bond issue would be mitigating flood damage, those would be cost shared, while others would not. So there may be other funds that do different things, that may be part of this. I was just saying that there are federal funds right now available for flood mitigation for structures that have had multiple claims on insurance, where there is a match requirement.

John Bailey: And you envision, Andy, that that fund can allow private money to go into it?

Andy Dana: I hadn’t thought of that but, sure, yes.

John Bailey: It’s not restricted in some way?

Bill Moser: I have a question as to why he would only want a dollar per dollar? Why not two or three dollars per dollar? It’s just a recommendation.

Andy Dana: Because there is a 75 percent cost share from FEMA, and now we’re getting up to like, this is a profit seeking activity here, I think. I think I’ll just leave it dollar per dollar, but it’s a recommendation, and if you want to go higher than it’s written, fine.

John Bailey: Any comments, anyone? We’re quiet tonight.

Jerry O’Hair: That isn’t real clear to me, “Establish a fund with the State of Montana...”

Andy Dana: I was thinking of using public funds, but I realize the merits of what John said. If people want to contribute to a community endowment or something like that, then they could make deposits, if Trout Unlimited or whoever wanted to make deposits to this fund. It would initially be funded by the State, is what I was thinking.

John Bailey: Other comments, anything? We’re probably worn out. Are we ready to go to Step 2? Okay, we’ll go to Step 2. The Chair will reread the proposed recommendation, “Establish a fund with the State of Montana to match, on a dollar per dollar basis, all projects that have been funded by the Citizens’ Advisory Council pursuant to a Park County Bond Issue.” Task Force, are there any final concerns or questions relating to this?

Bob Wiltshire: The only thing that I’m wondering here is, if we need to mention the River in there somewhere.

John Bailey: It’s tied to the other one that is tied to the River.

Bob Wiltshire: Somebody could say, “Well, we’re passing a bond issue for a new Rural Fire Department truck, and we’ve got a Citizens’ Council that approved buying that.”

Andy Dana: I think that is a good point, and so, "pursuant to a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes and important riparian habitats along the Yellowstone River." I think it should be dollar for dollar.

John Bailey: I want to move back to Step 1 since we've changed this, just to give anybody here the opportunity to comment. Any comments by anyone? Okay, we'll go back to Step 2 again, and I'll reread it: "Establish a fund with the State of Montana to match, on a dollar per dollar basis, all projects that have been funded by the Citizens' Advisory Council pursuant to a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes and important riparian habitats along the Yellowstone River."
Any final concerns or questions from the Task Force? Are we comfortable with this? I don't see any negatives so this recommendation reaches consensus.

Recommendation Passed by Consensus

"Establish a fund with the State of Montana to match, on a dollar per dollar basis, all projects that have been funded by the Citizens' Advisory Council pursuant to a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes, and important riparian habitats along the Yellowstone River."

What else would you care to do? We're still dealing with two from last week. Okay, you tabled this, we didn't know if you wanted to bring it back up for discussion here, that's all that is. Liz and I were uncertain if you wanted to bring it back up at this meeting.

Proposed Recommendation by Bob Wiltshire, tabled at the July 8, 2003 meeting:
"That no new non-floodable structures be constructed on Livingston Island."

Bob Wiltshire: I do not wish to bring it back up tonight. I will reserve the option to bring it up later.

John Bailey: Well we won't bring it up again until you do, okay? Now there's one that failed at our last meeting and I asked three people to try to meet and see if they could come up with an alternative.

#3. Proposed Recommendation by Bob Wiltshire, did not reach consensus at the July 8, 2003 meeting:
"Development restrictions be implemented to preserve the scenic values, the social values, and river characteristics identified by the socio-economic study as vital to the region's economic health."

Liz Galli-Noble: That was Ed, Michelle, and Jerry.

John Bailey: Our Ground Rules that we set back in 1997 or early 1998, state on the issue of consensus: *"The Task Force will seek consensus agreements regarding policy decisions and recommendations. Consensus is defined as acceptance of an agreement. Members may not agree with all aspects of an agreement; however, they do not disagree enough to warrant opposition to the agreement. When Task force members accept an agreement, they commit themselves to implementing the agreement. Participants who disagree with a proposal are responsible for offering a constructive alternative that seeks to accommodate the interests of all other participants."*

That's why I asked the people who didn't agree if they could come back with an alternative.

Jerry O'Hair: As far as I'm concerned, I don't see an alternative. I'm dead set against this and I don't see an alternative. I'm not going to legislate scenic values and social values to anybody, especially private property owners. So, I'm going to throw it into the court of the people that made this recommendation. I cannot see any way to work around this, unless they've got a different idea.

Michelle Goodwine: I guess my recommendation would be to, instead of develop new restrictions to be implemented that preserve the scenic values, social values and river characteristics, that we just uphold

the existing restrictions that are already in place for development; and that I could live with. Jerry, you must be able to live with that too, because we already are living with it.

Bob Wiltshire: Well, I'll just say the same thing I said last meeting, the reason this Task Force was formed was because those restrictions aren't working, and the Governor charged us with coming up with recommendations to help improve the situation. We are remiss in doing our job as a Task Force if we can't give the Governor guidance on how we the people want to see this move forward. My big concern, Jerry, I'm very sympathetic, that I don't want to be telling somebody what they can and can't do. However, I firmly believe that someone in the government is going to tell private landowners what they can and can't do. I think this is our opportunity to have a voice, at a local level, on how those restrictions are made. Because if we fail to put in locally supported restrictions, somebody from the outside is just going to make them and say, "here they are."

John Bailey: Jerry, I understand the word "restriction" in there, but one of the things that the socio-economic study talked about a great deal was that most of the people surveyed were very concerned about keeping the agriculture, ranching lifestyle. That was a very strong statement that came out. And it seems to me that we ought be doing something to identify it, and it should be beneficial to the whole ag world. People like the river, they wanted to use the river, but every one of them put agriculture very high on their list in that study. I thought it was fascinating, how people related to how they view the river. They just all put agricultural as a very high priority to be maintained. Maybe "restriction" is a word that does something here, but it seems to me that we ought to be addressing the social economic study, because it seemed to me to be promoting almost everything all of us liked, and didn't really tell us to do something that was going to hurt someone. Maybe that's the avenue we can go on. I don't know? I think the word "restriction" is a red flag, and I understand that. My view of the social economic study was that it was promoting sort of what we have, and that maybe we ought to identify that, make sure that some day, when somebody is trying to restrict you, you could go back and say, "Here was this thing, no." It seems to me that any of us could utilize that. I don't know if we can do something with this, but it would be nice to have some kind of recommendation that identified the socio-economic study as a positive thing.

Jerry O'Hair: I think the situation that I find myself in is that people talk about preserving agricultural values, and yet they fail to understand the situation that agriculture is in and what it takes to run a viable agricultural operation. "Development restrictions" I think is very open and I know that today that there's some concern about livestock grazing on the banks of the rivers and streams, and there's concerns about feedlots or places where they feed, I don't know what the number is, a certain number of livestock, and in this area livestock are congregated down along the river in the wintertime. So, I guess all the restrictions that have been put on us lately, including irrigation, and the State, and all the others, it's just a red flag and I'm very concerned about it, and I know some of the others are too.

Michelle Goodwine: Jerry and Ed, would you guys consider, if you drop the first sentence, or the first line, right up to the word "to", starting it with, "To preserve the scenic values, and social values, and the river characteristics identified by the socio-economic study as vital to the region's economic health." I guess it reflects that we support what we learned through that socio-economic study. My concern is that, through all the other recommendations that we've made, we've been very sensitive to the fact that we really don't go beyond a reach when we talked about banks, and reach, and what we are going to recommend on, and yet this one seems so open-ended that it could go peak to peak. That was even brought up at the last meeting that it is viewshed, it's not just flood plain, it's peak to peak, and I think that's where my concern comes in. So, I'd like to see it either further defined or revised. I'm sorry that I did not meet with Jerry and Ed to come up with an alternative.

Andy Dana: It seems to me that one thing that we're losing in the first line of this is the last line, and that is a focus on the importance of the Yellowstone to the region's economic health. If we can tinker with the first line, but leave the last line, because we do have science which shows that the Yellowstone, certain aspects of the science, are important to the economic health and we want to try to preserve or promote those. I guess what I would suggest perhaps might be wordsmithing by saying, "Propose policies to enhance the scenic values, the social values, and river characteristics identified by the socio-economic study as vital to the region's economic health," or "implement policies" or something like that, "develop and implement policies." I guess I'll leave it at that and see how people react.

Bob Wiltshire: That's fine with me. I thought we were coming up with a new one because we didn't reach consensus on that one.

John Bailey: Yeah, I'm not sure where we are, okay? We haven't been here before.

Andy Dana: And I would also say, after "social values" and the word "and", "and other river characteristics"... There is a self-limitation in this, because of that last clause, which has the policies to, purposes that are vital to the region's economic health.

#4. Proposed Recommendation by Andy Dana:

"Develop and implement policies to enhance the scenic values, the social values, and other river characteristics identified by the socio-economic study as vital to the region's economic health."

John Bailey: We've turned it into quite a different recommendation. Comments?

Andy Dana: I guess I don't want to, I didn't really mean to steal Bob's thunder. I was hoping to kind of wordsmith the original one and have it as Bob's.

John Bailey: We haven't really been to this juncture before, I expect we'll be here again, and I think that any recommendation proposed by anybody that has a solid majority. I think those who are in disagreement need to spend some time trying to see if they can do it. To me, as the Chair, looking at the Ground Rules, until all of you scream at me, this is the way I'm going to run it. I watched one meeting where we spent a whole evening on one recommendation and then it kind of died. Jim, you had a comment?

Jim Barrett: I was wondering if it is important to put in "enhance the scenic" or somehow say policies that would focus on some identified river corridor, to answer Michelle's concern, because it still says "scenic values" and if Jerry's back 40 is in my viewshed, then that implies that we're going to have a policy to prevent that. I'd like to work on that later, in some other context, but this is the River Task Force...

John Bailey: We're tying it to the socio-economic study, so I don't know...

Jim Barrett: Well, they did identify agriculture as one of the things that I've seen in Park County, so that goes...

John Bailey: I think we're tying it to a piece of science that we did, so if somebody is trying to use this, I think they have to go to that study. Somebody may want to limit it more, but I don't know that you have to open it up more, because I think they were along the corridor, they weren't up the Shields, so that would be the limit.

Bill Moser: I'll try to be brief. You're going to see basalt within the next few months, starting to roll out of the upper Yellowstone River valley at \$600 a ton. The basalt quarries are not visible from the river, but they are from the air, and they are going to have a very definite social-economic impact on Park County and the region. This kind of thing can be used as a hammer to stop that from ever getting started.

Andy Dana: I'll say, having put it up, I'm not all that thrilled with it because it is kind of gives nobody any direction. It's just development and then policies.

John Bailey: Do you want to change it?

Andy Dana: I'm thinking of tabling it. What would you do, Laurence, if this came to you?

Laurence Siroky: Well, the Legislature is the one that deals with policies, and then we get the Statute back to them. I guess a policy I would have, that's on the books right now, is the Floodplain Statute, that's the policy. The Legislature said this is how we're going to deal with preventing damage and protecting health and safety. That Floodplain Act itself is a policy, and the Rules implement that.

Andy Dana: I think I want to table this for now.

John Bailey: Okay, so what I want to ask the Task Force now, is, have we hammered on this idea long enough or do you want to keep going and move on?

Laurence Siroky: I guess the Floodplain Act might be one policy, another policy might be the incentives that you referred to earlier, bonds, passing bonds. They have the funding mitigation kind of efforts for flood plains for instance. So I guess I'm not, what I mean by policies, policies could be a proposed and generally the policies are adopted by the Legislature and the County, or the City, local governments.

John Bailey: But right now this has been tabled, and so we don't have a recommendation up and I'm not hearing an alternative for the one that did not reach consensus last meeting. Are we ready to move on to new things?

Bob Wiltshire: I think that as a realist I have to say "yes", we have to move on. I think it is very unfortunate. I think we're failing to do our job as a Task Force by not addressing this issue, and I feel bad that with the time and money we spent on this, that we can't find an innovative way to approach this, that we can work to satisfy people's needs; but it's obvious that we're not going to; so let's move on.

John Bailey: Well, you can come back with another recommendation.

Andy Dana: Or you can make further suggestions, if you want to continue.

Bob Wiltshire: No, I think we've reached loggerheads on this.

Andy Dana: I'm likely to bring it back, I just want to think about it.

John Bailey: Okay, that's fine. We're open for further recommendations.

Roy Aserlind: Let me reiterate that this is neither an edict, a mandate, nor anything kind of a directive. All it is a recommendation that should, in a sense, reflect the essence of this group. And if there is one key word in here, that may give rise to wordsmithing, it is the word "consider." That's all, consider, think about it. Not telling anyone what to do, just consider.

#5. Proposed Recommendation by Roy Aserlind:

"Whenever additional bank stabilization is indicated, consider the use of proven "soft armor" approaches, the use of "biostabilization," a reinforced vegetative method that allows for the recovery of damaged and impaired riparian buffers while simultaneously providing for restored, natural, bank stabilization."

Roy Aserlind: I can see Jerry looking at it over there, saying that that doesn't work all of the time, and that's why I say consider it, just think about it.

Andy Dana: I understand the spirit of this, and I don't have a problem with the spirit. What would worry me is if this was adopted as a criteria for permitting, so that it was essentially viewed by the Corps or DNRC or someone to say, "Our first preference is soft approach. You have to consider this, and you have to prove that that will not work in this situation, before we will consider another alternative." Is that what you were intending? In other words, it's a first cut that you have to pass before you get to consider other methods of doing it?

Roy Aserlind: Well, I was thinking just in terms of when a person is thinking of bank stabilization, this should be brought to his or her attention, that this is probably going to be, from my perspective, the first cut. We realize that there are situations where soft armor won't work, but I think there are many, many situations where it can and, as far as I was able to ascertain from reading about them, it's not detrimental to the river. It doesn't speed up the flow materially, and it seems like a logical approach. Now perhaps my sense of logic is warped, and I realize I have two strikes against me: one, I have a house in the floodway, and two, I drive an SUV; so that's about as big a loser as you can get.

Rod Siring: You need to bring me up to speed. I'm wondering what, when you say soft armor, what is soft armor in bank stabilization?

Roy Aserlind: Well, there are several methods, as far as I know, and again, I'm not presenting this as an expert, but one of the ways is to put down a mesh of fibrous material. Then you put plants in that, and in most cases, indigenous river plants, ones that will survive in a riparian vegetation system, and let them grow. As they grow, they will take root and the basic fiber material will biodegrade over time. Then there is another method that uses a soft mesh to hold the plant life in there. As far as I know, these have been used in many instances and I know a couple have not failed, but I think not succeeded in all instances. Just something for somebody to think about.

Jerry O'Hair: I don't particularly disagree with the recommendation, but are there any examples in the area that have proven that this is working? That's one of the things that I'd be very interested in, is there a specific example that would make this recommendation workable?

Roy Aserlind: I can't come up with one just off the top of my head, but let's just bring us all up to speed. In the east channel of the Yellowstone River, that flows by our house, we are now seeing signs of erosion. If I want to sit tight and wait, it will become Ed Schilling's problem because it will flood into the county road. But I don't want to wait for that, so I am anticipating taking this particular approach. If you talk to me in three weeks or a month, I should perhaps be much more cognizant. To answer your question specifically, Jerry, no, and I'm sure if I start looking around, I can come up with some very specific indications.

John Bailey: Roy, is a root wad a soft approach?

Roy Aserlind: I think so, but I think the circumstances under which the root wads are put in, were not the right circumstances. I think the flow was just too great, too direct, and I don't think proper consideration was provided my most involved.

Dave Haug: I think from my aspect, I like that idea to consider soft techniques, because it's an option to look at; but there are a lot of cases where you have a hard force direct on, and a lot of these softer techniques do not work. They're put in place and they're destroyed and later on gone, but I think it is a really good option to look at in all situations and toss them aside when you don't need them, but not go forward with it, because they are a workable situation in a lot of cases.

Bill Moser: About 10 or 12 years ago, the Turner Ranch had an open house and they were displaying probably three quarter's of a mile with this type of material. It compares expensively to riprap, and the problem is that you don't have a handle on velocity, and velocity is the determining factor that is going to rip this stuff out. If the landowner wants to spend the money to try it, and then the velocity of the river takes it away, then he's tried it, but he's also going to lose whatever was behind it at the time. There are several examples in some of the feeders and some of the Gallatin River of these various materials.

Chuck Dalby: There are a whole range of different methods that kind of fall under the soft armor approaches. One thing that they all have in common is they generally try to incorporate live vegetation, or the establishment of live vegetation. There are hybrid techniques that are frequently used where you use rock riprap to protect the toe of the bank, and give you some initial protection against scour, in the hopes that you can get willows or some other streamside vegetation a good root mass that will bind the whole bank together for it's stability. Nationwide, there are probably several thousand examples of these kinds of methods being used and statewide in Montana, there are probably several hundred. I think the NRCS and DEQ have produced several informational pamphlets that document case histories around the State of Montana. Jerry has had a very unfortunate experience with one of the harder soft armor techniques, that is, the use of root wads; and I think, while there are a number of success stories using soft armor approaches, there are also quite a number of failures. Generally, those failures can be attributed back to overextending your culpability in the wrong hydraulic environment. In Jerry's example it was a very tight bend, and who would have thought a 100-year flood would have followed the successive 100-year flood? Perhaps the outcome would have been different if that were to have several years to kind of cure, and solidify. I think the key is that you need to apply the right technique in the right hydraulic environment; and there are some areas where, if you are truly serious about inhibiting erosion, only very hard rock or some very solid revetment is going to accomplish that.

Annette Compton: MDT has also used some of the soft armoring techniques, and we've also had root wads wash out. We've had less consistent results with soft armoring. It sounds really good, looks really good, but it is not as dependable, at least from where we are right now.

Colleen Horihan: Speaking from the effects on, say, the water surface elevation just strictly that when you consider banks that have large rocks versus natural vegetation, the main Manning's value increases when you have large rocks like that, and so if we have several areas that have the high Manning's flood value, which is your roughness coefficient, when you do your hydraulic modeling, that will generally cause an increase in your water surface elevation. So, that's one difference between a rougher type rock versus something that is a little more smooth and of vegetative type.

Mike Lesnick: Kayaking the Yellowstone River this spring, I have noticed that an area, I'm not sure the landowner, but I believe it's the same gentleman who burned his house down to keep it from falling in, did use a soft armor technique just downstream of that previous house location. Part of that was failed by the high water this year, part of it is fairly well protected by existing large cottonwood trees and that was probably an area that can get watched and it will be a proof of using that technique in that area. There are also examples in that same stretch of river where very large, very square rocks, are in the process of failing, and that area can also be watched over the next few years to determine which technique will work in which area and which might not work at all.

Tom Pick: I guess what I'm hearing, I want to mention, just to go back to the rationale behind this, because I was thinking about a more naturalized bank but I think we all can agree that it's not an exact science, from what Chuck Dalby just said, it's a developing science. Maybe what could be appropriate would be a discussion of demonstration or the adaptation of the science to find things that do work, that are adapted to the velocities and energies on the Yellowstone, but that do use the bioengineering or softer type of approach, given that we don't know what works exactly in that realm.

John Bailey: I think one of the things that we haven't done with the studies—except the USGS-BRD that did some modeling on some of the barbs—addressed the different things going on in the river; and in order to actually look at them, you need to look at them over the long term. That's why the recommendation was proposed that we have the USGS and the BRD start looking at how projects relate in the river, but I think that's what several Task Force members are saying, "How can we do something better when we can't do something better until somebody starts to observe what is actually happening with what we have?" It may take 20 or 50 years actually to have a database that really tells us, but we have to start somewhere, and I'm wondering if we weren't going to have a recommendation from somebody trying to get a proposal like that. We still have a recommendation up here, anymore comments on it? Are we ready for Step 2? The Chair will reread the proposed recommendation, "Whenever additional bank stabilization is indicated, consider the use of proven "soft armor" approaches, the use of "biostabilization," a reinforced vegetative method that allows for the recovery of damaged and impaired riparian buffers while simultaneously providing for restored, natural, bank stabilization."

Task Force, any further concerns or questions relating to this recommendation?

Jerry O'Hair: I think I'm going to express the concern the same as Andy did, about whether this is going to become a criteria before you are going to be allowed to use something more stable, or maybe I shouldn't say more stable, but more proven. Until some type of soft armor method is proven, I certainly don't want to be going into this or that.

John Bailey: Other comments? Are we comfortable with this? This lacks consensus, so we'll go back to open discussion. Did you want to get a priority on it? I heard your concern was how it might be setting a priority of consideration, so if it had a priority would that satisfy you?

Jerry O'Hair: I guess not. Until I can see a proven project through a 100-year flood, I wouldn't even consider it.

John Bailey: One of the things this brought up, listening to your comments, was the Corps is going to do a SAMP, we all know that. Does someone want to get a recommendation here that sort of sets a priority of how

are people going to look at how projects are done? The Corps, in their SAMP, could certainly, even without a recommendation, put soft armor as a priority. I'm just sort of saying that here is an opportunity, if somebody wants to try to get our priorities set.

Andy Dana: Well, I'm not sure I want a priority, I just don't want this as THE priority, and so what I would suggest, I'd be happier, if it said, "Whenever additional bank stabilization is indicated, consider the use of proven soft armor approaches, the use of biostabilization", consider, I guess, "among other techniques" the use of proven soft armor approaches. So you're not limiting it only to soft armor, and that doesn't create a threshold.

Roy Aserlind: Andy, could you wordsmith this to turn it into a recommended study?

Andy Dana: No, because I'm not sure that I really want to go there. I think that, looking at this, I'd be happier if it said whatever you need to do. "Whenever additional bank stabilization is indicated, consider among other bank stabilization techniques," and so that lays it on a par with other techniques.

Bob Wiltshire: One thing I'm wondering here, and I have no problem with this, but it is something that I'm thinking about. One of the places that I thought maybe we could go, and it's been real fun to do this process, but one of the things that came out of all the science was that there is very obvious differences in different reaches of the river, and I'm wondering if this isn't one of those recommendations that couldn't be a bit more reach specific in some respects. I think about some of those entrenched sections, where the river really isn't moving, and I really hate to see somebody, I think on some of those sections would be perfectly suited to soft. I don't know, I'm not asking to change anything but I wanted to throw that out.

Vicki Sullivan: I'm representing Allan Steinle for the Corps tonight. I can't speak from the SAMP process because I'm not familiar with what's being proposed by the Corps on that, but I can speak from a permit standpoint. When a permit application comes into us, the only thing that can be looked at, and we try to promote, is minimization and avoidance. When we see applications come in that are heavy rock armor, we will look at the site, see if there are potentially other viable alternatives. And I agree, I also have seen root wad failures, but what the literature has demonstrated to us, there is certain applicability to them, but on other areas they don't work. I think we've also seen biotechniques work very well in areas and I don't think we need to, we shouldn't be lumping them into a category. Because we've also seen riprap failing miserably. But I just wanted to state, from a permitting standpoint, that when we see riprap projects come in, we do look at those to see if there are potentially other alternatives, and I agree, sometimes there aren't.

John Bailey: Other comments? Are we ready to move on with this to Step 2? I see some long faces. Hearing no objection, we'll go to Step 2. The Chair will reread the proposed recommendation, "Whenever additional bank stabilization is indicated, consider, among other bank stabilization techniques, the use of proven "soft armor" approaches, the use of "biostabilization," a reinforced vegetative method that allows for the recovery of damaged and impaired riparian buffers while simultaneously providing for restored, natural, bank stabilization."

Task Force, any further concerns or questions relating to this recommendation?

Jerry O'Hair: In the studies that have been made by the Task Force, has it been proven that barbs and armoring is detrimental to the river? Is that the reason behind a recommendation like this? Has that been proven, that it's detrimental to the river?

John Bailey: Roy, do you want to answer?

Roy Aserlind: I can only answer to the converse of that. That it has never been proven that any form of armoring has been salubrious for the river. True, it has protected land, landowners, which is its purpose. But I don't think it has ever been proven that it is really good for the river. We talk about the natural state, we talk about natural vegetation, we talk about the river view and all of those things. To me, frankly, I thought this would be a rather innocuous kind of recommendation here. No, as far as I know, I don't think it's been proven. It's aesthetically different, yes. I spend my life looking over at the Interstate 90 Bridge, tons upon tons of huge basaltic rock. I'd rather see the cottonwoods that were once there, but so be it. No, I can't answer your

question, but I guess I can only answer it as that it has not been shown to be detrimental to the river. Really, this leaves us all in a big guessing game, doesn't it?

John Bailey: Other comments? We are seeing if we have consensus right now. If there are no other comments, do we have consensus? Are people comfortable over here?

Andy Dana: I think I'm going to stand aside even though it's mine.

John Bailey: We're lacking consensus, so we'll move back to Step 1, discussion. I think one of the things that is interesting about this discussion is the fact that we don't have any science has left us somewhat in the lurch. That's sort of what I'm hearing in the discussion. We can try to work on this more, but...

Andy Dana: Since this is mine, now I'm going to table it.

John Bailey: But just listening to the discussion, you can see where the lack of science has left us sort of wondering. We don't have the science, but I keep waiting for people to recommend some further science or someone to do some kind of science. Now, before I ask for any more recommendations, as the Chair, on our weekly meeting I have no problem with all the recommendations coming up, but we have never left the topic of Bank Stabilization. We were on Floodplain Riparian for awhile, we haven't got to Sediment, we got Fisheries for a moment last meeting, Fires, Flood and Drought, GIS Information Map, Large Woody Debris and how many more of these are not on this list? How many more of our goals are not even listed here that we need to talk about?

Liz Galli-Noble: Topics of Consideration, there's probably another twelve that didn't easily fit under these topics.

John Bailey: So, my question to the Task Force is, a lot of time was spent a long time ago, talking about setting our goals, and that we would go through them. At the speed we're going, it looks like December. Liz and I need to hear from you what you want to do. I have no reason to change what we're doing, I think recommendations are coming that are good, but what is it you want to do? We need to know. Do you want me to move you along? There certainly hasn't been a recommendation come up that I thought was a waste of our time; I think they've all been good, but I am not certain what to do. I'm looking for direction.

Dave Haug: I think maybe we should move along and maybe take one or two of these a meeting and if we run out of comments or whatnot on that, then go back to whatever we've covered and go on. That way we're at least addressing something, either part or all of the time, allowing for new ones, and go back in the latter half or something.

John Bailey: Other comments?

Andy Dana: I think what Dave suggested is kind of what we envisioned initially, is that we take three or four topics, two or three topics a meeting and really focus in on those; and the task set for the members was to come up with recommendations on those topics for those nights. We've gotten away from that as the discussion has gone forward. And I don't disagree, it's been interesting and valuable; but we're coming up to crunch time, and if we do want to consider all of these projects, I think we need to have some structure like that, if we're going to get done by the deadline.

John Bailey: So, if someone proposes a recommendation that's not there, I don't accept it?

Andy Dana: I think we probably put it up and table it until the end of the meeting as Dave said, and if we've got time, consider it then. We've got to finish our work sometime.

John Bailey: Well, that's why I'm asking. I need to know what you want me to do. We're getting close to 10:00 p.m. now. Is that okay with everybody, that we're going to move through these topics and then come back? I see consensus.

Bob Wiltshire: Yes, but the question I have, John, is we keep coming back to Floodplain, Bank Stabilization types of issues. Are we then saying that we're done with those issues, because this started out, we were going to take these things and we were going to work through them and move to the next one? Well, we obviously haven't worked through this one.

John Bailey: But we've also been bouncing back and forth. We sort of moved out of Bank Stabilization and then we hadn't really gotten done with Floodplain, and we moved into Fishery. I want to have a discussion because we are in crunch time and I need some direction on what you want to do. I can move you along and not accept stuff, but I'm certainly not going to do that unless you want that.

Rod Siring: John, do we have in our minutes the Topics of Consideration, some of the debate and discussion that was given at that time?

John Bailey: Liz put together a packet that shows all the issues that were written down, that people brought up, when all the science came in, under each of those topics. He needs a new copy, Liz.

Liz Galli-Noble: I'll drop it by your house tomorrow morning.

Rod Siring: Just put it in the door.

John Bailey: I can see us sort of stopping, coming back, I can see many scenarios. Laurence?

Laurence Siroky: Steve Holnbeck and I were talking tonight. He's finishing up the sedimentation study, and was looking at some scenarios involving sedimentation and impacts, and there's got to be a point where we're going to want to hear that information. Maybe it's too late, I don't know?

John Bailey: We may not. The report is not quite done. If there is a question if the Task Force is going to stop now and start over. We're moving. We have until August 21 to officially exist. At the speed we're going, we are going to have to meet every week until then or we're not going to be done. I just want to have some discussion with the Task Force, because we need to know what to do. We need to know how many more meetings, if we need to start meeting twice a week, you need to let me know. I see, now I see negative, okay. We found the limit. I watch this and I think the process has been fascinating and very good. I couldn't be more pleased with how we're moving, but I don't see the end. Bob?

Bob Wiltshire: Well, I think personally, one of the things that is going on is that we started with the most complex of these points, and I personally would have no problem at all if we came in for a meeting, and we said "we're going to talk about GIS Information and Mapping," and I'm really interested to see if anybody has a recommendation to the Governor on GIS Mapping. I think we can maybe clear some of these off of our list pretty quickly.

John Bailey: Okay, so, if I'm hearing you correctly, at the next meeting, for the first hour to hour and a half, we will run through these issues we have not been dealing with, and if there are no issues, then we'll just open it up. Is that okay with the Task Force? Okay.

Andy Dana: I guess, I agree with Bob, but I do think we have a couple of big ones left, like Fisheries and possibly Sedimentation and Dredging, and what else is up there?

John Bailey: There's another that has 13 or something things in it.

Andy Dana: But as Liz said, those are pretty specific. The Fisheries, the Sedimentation, are too, and maybe Floods and Drought. So I guess what I would like to do is perhaps set those two for an hour, or an hour and a half, for the next meeting, Sedimentation and Fisheries. And then for the meeting after that, do Fires and Drought and maybe one other, and then have a catchall meeting a week after that, where we consider all the other topics. That would take us into the first week of August, and then we'll have two more weeks to finalize these, two or three more weeks, to finalize them.

John Bailey: So, you're suggesting a meeting on August 5th?

Andy Dana: I just worry about, if we say we're going to do all topics left in an hour or an hour and a half at the next meeting, if that's not realistic.

John Bailey: What I was thinking was to take some of what we think "lesser," and just put them first, so we can eliminate them and then move into Fisheries, if we did, next meeting.

Andy Dana: Okay, that would be fine. I'm sorry I misunderstood.

John Bailey: Once we start a big one, and we've had meetings where we've spent almost three hours on one recommendation. The discussion is well worth it, but once we start it, we can't stop. That is what I was thinking about. That way, if we move them off, then we move through them.

Andy Dana: That's fine.

John Bailey: You're suggesting an August 5th meeting. During the week of August 11th I'm not in the country. If you want someone else to run the meeting, have at it. The following week I'm here. So Liz, we're penciling in August 5th.

Liz Galli-Noble: I'll need to tell you that the Park Conservation District has a meeting that same night, and I'm generally asked to be at that meeting as well.

Dave Haug: And I'll be there.

John Bailey: Seventh? If we move fast, we may never have this meeting. We have yet to get to Step 3.

Bob Wiltshire: I'm gone that whole week.

Ed Schilling: Let's keep having them on Tuesday nights. We are set in that pattern and there is always going to be a conflict someplace.

Liz Galli-Noble: Dave, if it is okay with you, I just won't make that meeting, if you're comfortable with that.

Dave Haug: Yeah, that's fine.

John Bailey: We need to see if we can get the room though. Otherwise, we are booked for a meeting on Tuesday, August 5th as well. Okay, we still have 15 minutes for recommendations. And if you're tired, we can adjourn.

Bob Wiltshire: And then did we decide to go ahead with August 12th?

John Bailey: I didn't hear anything. I'm not here, do you want to run the meeting, Dave?

Dave Haug: No.

John Bailey: The Vice Chair doesn't want to run it.

Dave Haug: If I have to.

John Bailey: We'll see where we get within the next two meetings. If we can move out, if some of these small ones just disappear, then there is some pressure that disappears, okay?

Liz Galli-Noble: So let me get clarification one more time. So, on the Agenda for the next meeting, we want to approach some of these simpler subjects.

John Bailey: Yes, we want to put what we think won't last too long at the top, and we'll be proven wrong.

Liz Galli-Noble: So, GIS yes? Large Woody Debris?

John Bailey: That could last for days. We need to go through them, and if they are going to get longwinded, we'll have to bring them up again. And if we meet through September, that's what is going to happen.

Liz Galli-Noble: I'll send out an e-mail Thursday, we'll finalize the agenda with the topics to be discussed for next week, so the Task Force can prepare.

John Bailey: All right. Any more recommendations tonight? Is everybody worn out?

Bob Wiltshire: No, no. I don't want to make a recommendation. I'm thinking about thinking about a recommendation, but if there's no hope, I don't want to waste everybody's time. And it would be something along the line of "A recommendation that we secure or investigate federal funding to relocate everything that's in the floodway in Livingston." It is not a recommendation, and it is really radical, and if it's obvious that we're not going to be able to get there, I don't want to waste anybody's time.

John Bailey: I would like to point out that we have generally not followed our Step 1, Step 2, and Step 3 format. Step 1 is a general discussion. We typically start with a recommendation, so what you're doing, Bob, is actually what we set out to do in the first place, but never did.

Bob Wiltshire: Does anybody think that that is something that we should discuss, or am I just too far out there?

John Bailey: I think it's good. You could take it individually, I would think, if we're going down that path, that there would be several recommendations that would get made; then in Step 3, they would have to be merged. I think each one separately. My view is that we haven't been making recommendations to solve the problems. I've been saying that I thought the biggest problem was right here in Livingston and I think this map hopefully will wake everyone up to the fact that Livingston is a sitting disaster. It's going to take a different view; I think everyone should try to find solutions.

Bob Wiltshire: They are moving whole cities on the Mississippi River and on the Red River. I'm only asking to move half.

Andy Dana: How do you distinguish between Livingston and everything else in the flood plain? Why do you want to do it?

Bob Wiltshire: Andy, that's why I'm not ready to make a recommendation, because I started thinking about it, and what boundaries do we put on that? Is it Carter's Bridge to Highway 89? But if everybody thinks that that is just crazy, to tell people, "we're moving your house," and "your house on the 400 block of South L Street is now going to be a new \$100,000 house up on the side of the hill somewhere." I don't know?

Laurence Siroky: I guess the discussion is good. Whenever there is flood damage, there is always more than one way to look at it; and that is, look at structural measures, mitigation measures, or avoidance measures, and sometimes it takes a combination of both of those. Certainly, what you're suggesting has been done in communities, and in some cases they've done a combination of those kinds of things, of structural measures and getting houses out or structures out. Flood insurance is a way of mitigating damage, so there is a whole list of things. Yes, it may be radical to move every house, but there are a number of things that are used all over the United States, that State governments had proposed or Federal government has proposed. We talked about incentives here, bonds, there is a whole menu of things that can be chosen to mitigate flood damages, and FEMA has found that the expense of mitigating floods is way less than paying for damages after it occurs. So, it would behoove all of us to think about one's list of menu things that we can do to reduce damages in the future.

Liz Galli-Noble: What does the City and County say about that, what Bob just suggested? I'm really curious if that is feasible, and as representatives of the City and County, how do you respond to that?

Jim Woodhull: My first reaction would be to ask Karl about the feasibility of such an undertaking.

Karl Christians: My thoughts are that it is a great suggestion, to remove everything out of the floodway, because getting every house out of the flood plain is the only surefire way to be protected. It's going to flood, it's just a matter of time. As far as feasibility, the 205 Study will look at that, that the Corps is going to do for the City of Livingston. As far as the other structures in the floodway, one cutoff point would be to look at the cost/benefit. Some of those just upstream, Charvat's house, he's had three feet of water in there a couple times. I forget the name, but close to them, they've only had a foot of water, but they are in the floodway. To relocate a house that's only had a foot of water of in it, I've run the cost/benefit analysis on other structures, it won't pan out. So, one decided factor would be to look at cost/benefit ratios on every structure, or anybody who is interested in the County part, to see if it would be cost efficient to do that. In the City, it's a huge undertaking, they've done it in other parts of the country, as Bob said. My gut feeling is, the property owner can say, "No, we've lived through the 1974, 1996, and 1997, I'm not interested in moving. I'll take my chance on getting flooded." That's just my gut feeling, we've run into that in other areas of the state. However, the 205 Study will identify alternatives, different measures to look at that; but it is a good recommendation, it really is.

John Bailey: Comments? Hearing no comments, we are adjourned until next week. Thank you.

Note: See *Attachment C* for summary of recommendations that have reached consensus.

VI. Next Task Force meetings:

July 22nd, 2003, Tuesday – Task Force Recommendation Deliberations
Location: Yellowstone Inn

July 29th, 2003, Tuesday – Task Force Recommendation Deliberations
Location: Yellowstone Inn

August 5th, 2003, Tuesday – Task Force Recommendation Deliberations
Location: Yellowstone Inn

VII. The meeting was adjourned at 10:15 p.m.

Attachment C. Task Force Consensus Recommendations

June 18, 2003

Consensus was reached on the following Task Force Recommendations.

Note: These recommendations are subject to final adoption under Step #3 of the *Steps for Formal Action on Task Force Recommendations* (see footnote below for details).

Recommendation 5/22/03—Passed by Consensus

"Create a local Bank Stabilization Information Clearinghouse to provide information about new and existing methods of bank stabilization, including methods that complement the natural system and methods that might be appropriate for specific individual situations."

Recommendation 5/22/03—Passed by Consensus

"The Task Force recommends that future decisions be made only after thorough consideration has been given to the geomorphology of particular river reaches and their different inherent characteristics."

Recommendation 5/22/03—Passed by Consensus

"That studies be developed which would indicate what types of bank stabilization would work best to achieve particular goals within different geomorphic reaches of the upper Yellowstone River."

Recommendation 5/22/03—Passed by Consensus

"That the existing streamlined uniform permit application process be continued among local, state, and federal permitting agencies."

Recommendation 5/22/03—Passed by Consensus

"Establish financial incentives to help landowners, on a voluntary basis, to remove structures that no longer function properly or are obsolete."

Recommendation 6/2/03—Passed by Consensus

"Establish financial incentives to help landowners, on a voluntary basis, to modify or replace existing structures provided that such modified or replaced structures eliminate or mitigate undesirable impacts on the riparian system."

Recommendation 6/2/03—Passed by Consensus

"Modify or replace existing public structures that have undesirable impacts on the riparian system, provided that such modified or replaced structures eliminate or mitigate those undesirable impacts with no significant adverse effects on existing public or private entities."

Recommendation 6/2/03—Passed by Consensus

"Implement a solution to achieve hydraulically-balanced water surface elevations, with little or no backwater, in the channels separated by Ninth Street and Siebeck Islands."

Recommendation 6/2/03—Passed by Consensus

"Recommend that when the following bridges are replaced or removed, hydraulic impacts identified in the Geomorphology Study be lessened: Emigrant Bridge;

Carter’s Bridge; Interstate-90 Bridge; Railroad Bridge at Highway 10 East; Highway 10 East Bridge; Highway 89 Bridge near the Shields River; Railroad Bridge at Highway 89; and Springdale Bridge.”

Recommendation 6/2/03—Passed by Consensus

“Develop solutions to remove abandoned bridge abutments and piers, and reclaim abandoned approaches.”

Recommendation 6/2/03—Passed by Consensus

“That additional studies should be designed and conducted to document the proliferation of noxious or invasive plants along the river corridor, and to evaluate the impacts on fish, wildlife, water quality, soil and bank stability, and economic productivity.”

Recommendation 6/11/03—Passed by Consensus

“All permitting and/or regulatory management decisions (including the SAMP) must recognize and respect:

- a. the function of the flood plain, including but not limited to: connectivity between the river channel and the flood plain; regeneration of cottonwoods and other riparian vegetation; and maintenance of side channel habitat for spawning and juvenile fish; and**
- b. the public and private interest in protecting private property and important social, economic and natural resources existing on or near the flood plain of the Yellowstone River.”**

Recommendation 7/15/03—Passed by Consensus

“Propose a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes, and important riparian habitats along the Yellowstone River; and establish a representative Citizens’ Advisory Council to develop criteria, to recommend expenditures, and to facilitate approval of projects funded by public monies.”

Recommendation 7/15/03 –Passed by Consensus

“Establish a fund, with the State of Montana, to match on a dollar for dollar basis, all projects that have been funded by the Citizens’ Advisory Council pursuant to a Park County Bond Issue to protect and preserve agricultural lands, scenic views, socially desirable riverscapes, and important riparian habitats along the Yellowstone River.”

Step #3. Adoption of Final Set of Recommendations

- a. Prior to finalizing its recommendations to be forwarded to the Governor, the Task Force will accept public comment (written only) on the recommendations previously adopted in Step 2.**
- b. At its last meetings during which the Task Force finalizes the complete set of recommendations to be forwarded to the Governor, Task Force Members may not propose new recommendations but may propose modifications, amendments, or deletion of any of the previously adopted recommendations in Step 2 for any reason, including but not limited to:**
 - i. To address concerns expressed by a Task Force Member’s constituency or the public about the original recommendation;**
 - ii. To eliminate potential conflicts between recommendations;**
 - iii. To delete redundant or duplicative recommendations;**
 - iv. To integrate scientific studies and data more efficiently into the recommendations; or**
 - v. To correct clerical, typographic, transcription, grammatical, or rhetorical errors.**
- c. The Task Force will adopt for transmittal to the Governor a complete set of recommendations based on the individual recommendations adopted by consensus pursuant to Step 2 above, as such recommendation may be modified, amended, or deleted by consensus pursuant to Step 3b above.**
- d. The final set of recommendations must be approved by the Task Force for transmittal to the Governor by consensus.**