FOUR FOREST RESTORATION INITIATIVE

4FRI Stakeholder Group Meeting Minutes
Wednesday, June 25th, 2014
9am-12pm, Aquaplex, 1702 N. 4th St. Flagstaff
Teleconference line: (712) 432-1500, code: 292353#

9:00 Attendance: Ethan Aumack, Pascal Berlioux, Kevin Boness, Wally Covington, Dick Fleishman, Steve Gatewood, Alicyn Gitlin, Bill Greenwood, Steve Horner, Eli Lauren-Bernstein, Tom Mackin, Sharon Masek-Lopez, Joe Miller, Jerry Payne, Sue Sitko, Sybil Smith, Earl Stewart, Paul Summerfelt, Buck Swaney, Diane Vosick, Amy Waltz, Mike Williams, Russell Winn, Travis Woolley, Jason Rosamond, Randy Fuller, Kevin Burke, Tim Kinney, Gabe Smith, Jill Grams, Andy Cuevas, Ann DeMarco, Ron Lee, Rebecca Davidson, Mary Lata, Terry Baker, Bob Seidler, James Perkins, Adam Spade, Buzz Ivicek, Bryan Zebrowski, Mary Davis, Cory Gross, Brian Prater, Jay Smith, Nick Hecker, Buchanon Davis, Rick Stilgenbauer, Tom Osen, Bill Baker, Jim Zornes, Linda Lind, Chris Stephan, Karen (works with Chris Stephan at NewPac)

Phone: Steve Paulken, Tom Fosharsky, Duane & Steve Vagaan, Darren Gurner, Hunter Moore, Rob Marshall, Rob Davis,

9:10 Approve minutes from May 28th SHG meeting —Sue
Minutes approved

Action item	Contact	Status
1. Economy and Utilization Work Group to revise 4FRI resolution based on SHG comments received at this meeting and post on BASECAMP for approval before the June SHG meeting. They will also develop a charter to govern the Work Group.	Steve Gatewood and Rob Davis	In progress
2. Communication Working Group to post draft charter on BASECAMP for SHG approval	Eli Lauren-Bernstein	Completed
3. MPMB to report back to SHG on which (non 4FRI EIS) task orders to target for monitoring and prepare general monitoring brief at June SHG meeting.		In progress
4. “Governor’s Group” to share maps with SHG on new categorization and visualization of “preponderance on large, young trees”.	Todd/Ethan	In progress
5. USFS to share % canopy cover map/data for Ft Valley treatments and Amy to produce short write-up on it.	Amy	In progress

9:15 Call to the Public
no comments from the public

9:20 USFS update – Dick
STAFFING: Randy Fuller (new Coconino silviculturalist) is now on staff. Welcome Randy! New ID team lead should be on staff within a few weeks. New NEPA coordinator search still on.

4FRI EIS: Approximately 7,000 acres of 4FRI EIS area burned in the Slide Fire. The fire burn assessment needs to be completed to update conditions on the 4FRI first analysis area, which will delay slightly the return draft Record of Decision (ROD) timeline; we expect to see the draft ROD in late August early September.

NEPA in process: Larson (30,000 acres) decision is expected this fall and the Upper Rocky Arroyo expected in the summer of 2015. Both will provide additional acres (above and beyond 4FRI task orders) to the East Side industries.

IMPLEMENTATION: All but 2,000 acres of 2015 task orders have been completed and we are working on 2016 task orders as well. By end of the year we expect to have up to 50,000 acres of prescriptions completed for 2015-16 task orders. Marking crews are working across forests to get this prep done. The Gila NF is going to offer the 6th timber sale in the 4th quarter of 2014 to increase operations on the E. Side. Dipping Vat timber sale (Apache-Sitgreaves NF) has been sold but not yet awarded. We hope to have a signed MOU b/n SRP, NFF and USFS formalizing the N. Arizona Forest Fund (additional funding source for forest restoration in N. Arizona) and be able to use some $ for FY 2015 on one or two projects.

MONITORING: resource imagery (30cm resolution) has been gathered for the Coconino.

> Question: could the USFS provide a standing bulleted update (in written form) in the future for the above USFS updates. Also add reports on managed and prescribed fires; location and acreage. Lastly, please separate the # of acres approved versus acres treated.
>
> Answer: YES!

9:30 GEPAZ industry update – Jason Rosamond
(see presentation posted on BASECAMP) Biomass utilization is the key component in the immediate future. “No one wants to wait 2 years to build a biomass utilization plant”. Need short term, profitable uses of biomass until biofuels can be brought online.

Highlights from Steve Horner's (Campbell Global) presentation

Task Order Name	Treatmt. Acres	Date Issued	Forest	Status	Map
Ranch	932	2013	A-S	Completed	
Christopher/Hunter-Mercer	952	2013	Tonto	Inactive	
Alder	1,307	2014	A-S	Active	
Dogtown	1,716	2014	Kaibab	Active	
Bobs	2,017	2014	Coconino	Inactive	
KA	1,046	2014	Kaibab	Inactive	
Pomeroy	1,646	2014	Kaibab	Inactive	
Clark	1,684	2014	Coconino	Inactive	
Elk	2,901	2014	Coconino	Inactive	
Weatherford	1,017	2014	Coconino	Inactive	
TOTAL	15,218				See more

The ten above task orders have issues to proceed. Mercer task order is on hold for wildlife. Just over 500 acres have been completed on Alder. An eleventh, Community Tank (Williams) has been recently issued, and a number of 2014 task orders are about to be issued. For a complete list of task orders see: http://www.fs.usda.gov/detailfull/4fri/home/?cid=stelprdb5438777&width=full

Current implementation rate (Alder) is 15-20 acres/day.

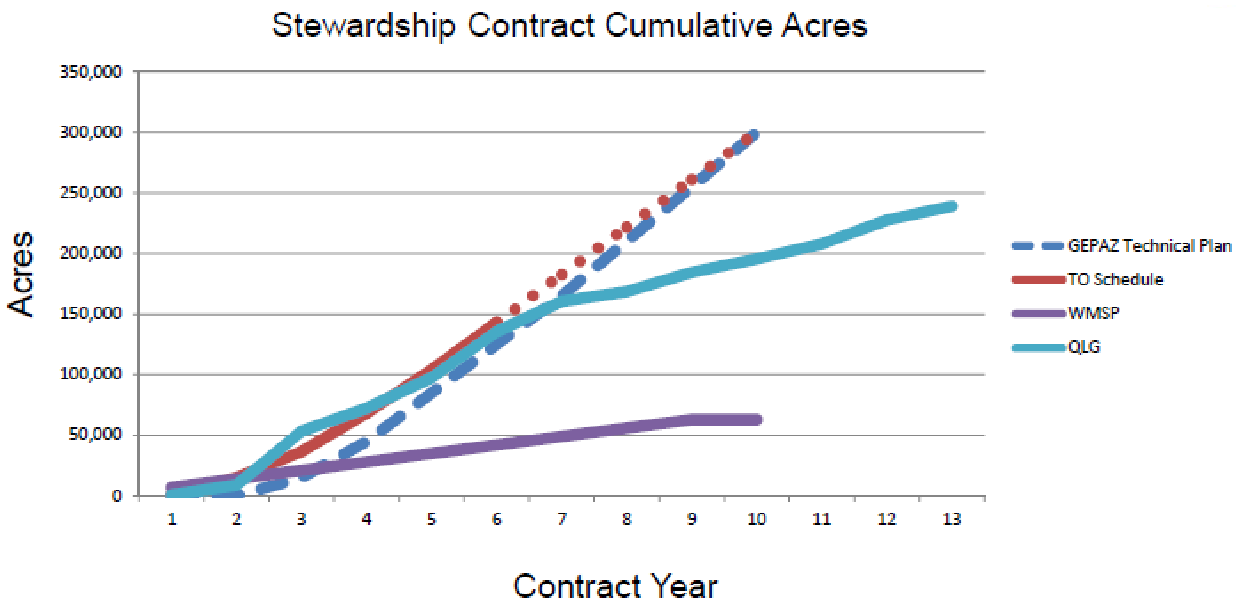
EXISTING MARKETS in Arizona for logs, poles, chips and biofuel have bene identified and show the ability to grow. This is encouraging. There is also demand in S. California, New Mexico, Mexico, and overseas. Campbell Global has been working very hard to identify and explore all these markets.

TRANSPORTATION and HARVEST TECHNOLOGY and specifically haul type/capacity has been a major area of research. Harvest cost needs to be as low as possible for the entire projects economics to work out. Material must be removed from harvest sites within 30-60 days, however this means that ~1/2 of the weight being hauled is water, which reduced profitability.

PRODUCTS need to be tailored to specific market demands, and must be highly diversified.

LABOR can be drawn from the abundance of local expertise, but will need to attract regional loggers as well. However, the wages being paid are not competitive to those paid on a normal timber sale …this project is going to affect the cost structure for forest labor in the region.

See graphic below for how other projects compare to the 4FRI implementation ramp up schedule. The red line is 4FRI task order schedule, derived from taking the 300,000 total acres by the remaining years in the contract, while the blue line is the GEPAZ Technical Pl an, which schedules an increasing rate of implementation that will achieve the contract goal by the end of the 10 year period. The purple line



represents the actual implementation accomplishments of the White Mountain Stewardship Project and the light blue line represents the Quincy Library Group project in the N. Sierra Nevada, which ramped up quickly and then plateau'd due to litigation and the effect of the recession (a reminder that these sorts of projects are not recession proof).

Highlights from Jason Rosamond's (GEPAZ) presentation

Goal of this presentation is to show how GEPAZ is resolving the many simultaneous challenges to industry ramp up (e.g. biomass utilization needs to be considered in parallel with saw log utilization). No government subsidies are being used, and $150M is on the line for the biomass alone (see Product Mix below: 50% of material from task orders has been chips). The product mix does have a very big impact on the business plan and GEPAZ is updating their financials based on the product mix they are seeing come out of initial task orders. The Product Demand in to Acreage Covered table (below) shows current implementation volume, which translate to a ***rate*** of 6,500 acres treated/year as compared to volumes and rates for "Developing Demand" (rate of 22,500 acres/year projected for end of July, 2014) as well as "Future Demand" (rate of 33,750 acres/year projected at the end of the 2014 calendar year).

Product demand into acreage covered

Examples of how wood production figures translate to acres restored. Three scenarios:

Current Demand

1. 30 truckloads of chips is 750 tons per day / 187,500 tons per year
2. 15 truckloads of ground biomass is 375 tons per day / 93,750 per year
3. 7 truckloads of saw-logs is 175 tons per day / 43,750 tons per year

6,500 acres per year

Developing Demand

1. 45 truckloads of chips is 1,125 tons per day / 281,250 per year
2. 45 truckloads of soils / biomass is 1,125 tons per day / 281,250 per year
3. 90 truckloads of saw-logs is 2,250 tons per day / 562,500 per year

22,500 acres per year

Future Demand

Additional acreage covered will be through an additional log-line at Williams for 40 truckloads per day. This will require a corresponding expansion in biomass markets, through soils, chips, pellets, and biofuels for an additional 80 truckloads per day.

33,750 acres per year

Additional acreage will be developed through biofuels and/or additional sawmill capacity

Product Mix

Product Mix: medium-term

1. 50% sawlogs
2. 25% chips
3. 25% other products (soils, poles, ground biomass)

Current Demand

1. 30 truckloads of chips per day
2. 15 truckloads of ground biomass per day
3. 7 truckloads of saw-logs per day
4. Identifying soils and poles markets

Next Steps

1. Test loads of chips this week
2. Finalise soils program analysis
3. Continue mill improvements at Heber
4. Williams pending completion of soils production analysis (water requirements, total land requirements, equipment requirements, foot print)

Integrated Supply Chain – Complex Issue requires a Complex Solution

Buyer Lumber Offtake	Trucking	Lumber Milling	Trucking	Saw-logs		Logging Delimbing Forwarding to Central Landing
Buyer Pole Offtake	Trucking	Poles	Trucking	Pole Logs		
Buyer Chips Offtake	Trucking			Chips	Chipping	
Buyer Bioenergy (Power)			Trucking	Ground Biomass	Grinding	
Buyer Fuel offtake	Trucking / Rail	Bioenergy (Fuels)	Trucking			
Buyer Soils Offtake	Trucking	Compost and Bagging	Trucking			

- 15.5 million tons of fibre including 50% slash
- 300 truckloads per day, every day, for 8 years requires 600 trucks
- New market development in California, Arizona, New Mexico and Utah

All components must be in place simultaneously for the project to succeed

INTEGRAGING SUPPLY CHAIN (see above graphic): These are complex issues requiring a complex solution. Jason shared the following as examples:

- Central landings are being considered for multiple/adjacent task orders to minimize transportation inefficiencies—this will require negotiations with USFS, but might in some situations be located on private land, if owners agree.
- Future demand will require 300 trucks/day x 2-way hauling=600 trucks…but the largest AZ truck supplier doesn't have that many trucks. GEPAZ, believes they have resolved the trucking problem by including CA suppliers. They will also require 20 logging sides working/day…they plan to start with 5 and expand.
- Some chip buyers (e.g. Novo Power) have offered to use their own trucks to pick up chips from the woods
- Chris Stephan (Newpac fiber) connected GEPAZ with a soil amendment market opportunity to utilize biomass (which will likely include some or all of the following: composting of slash; bagging slash in Williams; and producing topsoil). Jason has a meeting with the soil amendment company in question tomorrow and should have answers thereafter about the viability of this option.
- Biofuels technology development is still under way with Concord Blue and Lockheed Martin. Investments in biofuels will need to follow on the success of composted biomass (and other products) for the short term. Long-term, 85% of the 4FRI biomass is on the W. Side.

Questions for Jason and Steve:

- (Pascal) appreciated hearing that these "real challenges" are being worked through, but why weren't these specific challenges/issues worked through before the contract novation and when do you expect the Concord Blue biofuels technology to come online?

  (Jason) Things have changed (e.g. the projected 70% saw log production volume changed to 50%, and the biomass volume increased) since the contract was transferred. Now that task orders are being released and completed GEPAZ has a much more precise idea of how to expand product marketing. Based on the current numbers from other markets Jason emphasized that GEPAZ does not expect or require the Concord Blue biofuels technology to be a "silver bullet".
- (Kevin Burke) Has the plan changed regarding a decentralized network of pellet plants across the 4FRI landscape?
  - (Jason) That is still the plan, but those pellet plants will come after first finding export markets for chips, to generate immediate profit.
- (Sharon Masek-Lopez) She has heard the terms "green water" vs "blue water" used with respect to the water in trees vs. biomass (50% of tree weight is water). What are the relative costs of utilizing green vs blue water? Green (water in the trees) vs Blue (water out of the biomass).
  - (Jason) The question is how to use blue water to our benefit? This is a resource that we are looking for ways to utilize and will depend on what each product's market demands.

- (Paul Summerfelt) said he was reflecting on how landscape scale forest restoration N. Arizona has evolved over the last few decades…GEPAZ's work to date signifies real progress! There is a real sense of urgency—the fire that takes out the current GEPAZ contract could occur this afternoon—but Paul feels we need to focus on current progress as well as what's urgent.
- (Ron Lee) asked if there is a contingency plan for loss of 4FRI acreage from fire (for example: 7,000 acres were burned in the Slide Fire).

  (Jason) This is a business risk reality. Insurance is held on the contract, and it is very expensive. Also, the geographical diversification of task orders spread across the landscape is a means of spreading that risk.
- (Diane Vosick) Two years ago the Stakeholder Group demonstrated there was interest in qualified workforce training opportunities for local people on this project…where are we in moving this forward now?
  - (Steve) Workforce needs will change over time. CG is now exploring what labor is needed and what exists locally. CG foresees the need for local and regional labor. They are very interested in responding to the workforce training opportunities with local communities.
- (Jan Ribellin) Asked what can be done about the prevailing wage issue that Steve described as a challenge in keeping labor and implementation costs down. Does this also apply to the market value of chips?
  - CG is trying to identify the line between prevailing wage and non-prevailing wage right now. Geographic breaks (e.g. differences in cost to ship chips to San Diego vs. Snowflake) will likely drive up the price for local markets.
- (Ethan Aumack) What does success look like and what should give the local community confidence that things are moving forward successfully? The answers given last October have largely not been met. What are your answers now?
  - See powerpoint Product demand into acreage coverage slide. 22,500 acre run rate by end of July and 33,750 acre run rate by end of the year. Developing and securing product markets is the key to making this happen.
- (Ken Ribelin) moving material to a central processing site (on USFS)—how can this be done in the 3 day window required by USFS? Doesn't seem possible from my experience.
  - Time and motion studies are determining what is possible. Exploring models from around the world to see how to make the economics work.
- (Pascal) Will this presentation will made available on BASECAMP…Jason says, yes! Campbell Global is taking this process seriously, thank you! You (GEPAZ) are currently losing $...how long are you willing to keep losing money?
  - We are currently losing $ and that should change immediately if the soils product conversation goes well.
- (Joe Miller) are we starting to plan for the coming decades to sustain these major investments? 2nd analysis area and beyond.
  - Yes, we agree. The White Mountain Stewardship Contract is a good example of why it's important to plan far ahead on these issues.

10:15 Campbell Global operations update – Steve Horner
see ppt. from Steve.

Introduction of staff: Ann DeMarco (administrator forester) and Andy Cuevas (logging supervisor)

Task orders: 10 have been issued orders to proceed. As of last Monday 1,532 acres have been completed with 15,218 issued (a request was made that this information—acres harvested—be included on the GEPAZ website). Treatment rates are currently approximately 10 acres/day. Tri-Star logging has been doing a fantastic job in achieving desired outcomes.

Logs/Poles/Chips/Biomass Fuel: We are working with an inherently low-value product. Marketing will initially focus on Arizona, but there is great demand to expand these local markets. Phoenix, N. Arizona (4FRI East Side and West Side) markets have all be proven.

Outside of AZ (Lumber/Logs/Poles/Chips/Biomass Fuel): demand in Asia, California, New Mexico, Mexico have all been identified and some material already shipped there.

TRANSPORT: Steve has been changing oil on his vehicle every week just making trips throughout the region to develop markets. CG is exploring options to back-haul with various other trucking businesses. They are also exploring rail transport options—but that looks expensive and difficult at the moment; may be easier when volumes increase.

EQUIPMENT: identifying correct equipment for increasing efficiency and volume. Some of that is in the region already, but more is needed. Lowering the harvest cost is the ultimate goal. Multiple machines are being tested, with an eye to bottom-line operations cost.

CONTRACTORS: Existing workforce has been extremely helpful, but we realize that regional labor capacity needs to be brought in. Company support from GEPAZ is also going to be instrumental. All of this is focused on controlling harvest cost.

OPERATIONAL CONSIDERATIONS: According to the contract, there is a 30-60 days requirement that biomass must be removed from the site. Roughly 50% of what is being transported in the biomass is water; if trees could be dried before hauling that could significantly reduce transport costs. Wildlife protection (1/3 of task orders have wildlife restrictions for some part of the year) is a major issue when it comes to operational efficiencies—equipment often has to be moved back and for the between task orders. Fire restrictions and weather are additional constraints.

CHALLENGES: Approximately ½ the material being removed from task orders needs to be ground-up and removed from the site (see Product Mix from Jason’s presentation). Cutting small diameter trees with a large feller-buncher can be really inefficient and CG is working to improve equipment options. Labor cost (prevailing wage) administration is a big task in of itself and the hourly cost for labor will be the largest sub-category of all implementation expenses. Wages are not competitive with timber sale wages. Future task order acreage is still pending review and represents significant risk to the contractor (see graph; Quincy Library Group and

WMSC as a reference point for how to ramp up and what can go wrong). Reminder: restoration forestry is not recession-proof.

A sustainable business model is being developed to make sure that the implementation schedule meets objectives. Community support, creative ideas, and patience are all necessary and welcomed by CG.

10:30 Break

11:00 4FRI 2014 Strategic Planning mid-year progress report – Buck

See ppt—review of the SHG 2014 goals and quarterly objectives progress to date.

11:15 MPMB report on initial task order monitoring –Eli

4FRI Task Orders and Monitoring Opportunities (talking points from Sharon Galbreath)

The MPMB has been reviewing the task order list that you see projected on the screen. Just a reminder...the years in this table reflect award dates, not actual treatment dates.

- Given the need for pre-treatment data, it is too late to institute monitoring on projects taking place under the 2011 task orders. The MPMB has decided to focus on the 2014 and 2015 task orders.

- The purpose of our process is to determine which of the 2014 and 2015 projects would present the best monitoring opportunities, related to desired conditions developed under 4FRI and displayed in the Adaptive Management and Monitoring Plan.

- I reviewed the original Decision Notices and EAs for all 20 of the 2014 and 2015 task orders. When reviewing the NEPA documents, the focus was on finding projects that overlap with key 4FRI desired conditions, such as preservation of old growth trees; large tree retention; the creation of interspaces; canopy cover; tree density; group structure; understory diversity and the use of fire as a restoration tool. We are not looking for a perfect match.

- The result of this NEPA review is a 10 page synopsis of the proposed actions for the projects that the various task orders were analyzed under.

- I had hoped to create a spread sheet displaying key project attributes, but the NEPA documents do not use consistent terms and descriptions.

- It is important to note that each task order is a subset of a larger project and the actions that we have identified will not necessarily take place on every acre.

- The MPMB is using the task order information to create a first draft of likely projects for monitoring. We are in the middle of that process, but I can state that it seems to be the most recently planned projects that are more compatible with 4FRI objectives.

- For Example: While 10 of the task orders clearly state that no pre-settlement trees will be cut, these projects vary wildly on other key issues.
- Once we have finished writing the monitoring questions, we will then look at the task orders related to our monitoring candidates, to determine if the task order is a good fit.
- When we are finished with this process we hope to have developed a framework that will be applicable to the monitoring of 4FRI projects.
- The drafting of monitoring questions has been a concurrent process.

11:30 Economics & Utilization (EU) Working Group update – Steve Gatewood
A revision of the "4FRI Shortfall Resolution" was prepared for this meeting, incorporating changes suggested by stakeholders at the May SHG meeting. The next EU working group meeting will occur soon. The revised resolution will be posted on BASECAMP and stakeholders are asked to provide and request for changes by July 4th. Approval will be conducted online via BASECAMP.

11:40 Stakeholder Disclosures and Accountability – all

(Rebecca Davidson) Northern Arizona Forest Fund is a collaboration between SRP, NFF and USFS and is a new fund to support shelf stock NEPA projects outside the 4FRI/GEPAZ contracting area. Projects that have direct watershed connections to the Phoenix basin water supply will be prioritized. NAFF is looking for ways to encourage additional corporate investments in the Fun.

Question: Is the NAFF a continuation of the AWIF, or is it something new?

Answer: Many of the same folks who were involved in AWIF are also involved in the NAFF, so it is a loose continuation of that effort.

(Ethan Aumack) the Governor's Group has met again (probably the last time) and Ethan would like to come meet with the LAM to integrate those conversations.

(Joe Miller) Tom Mackin was recently recognized as a "hero of conservation" by Field and Stream magazine and Toyota.

> (Tom Mackin) I'm actually the 4th Arizonan to be recognized in this way in the last 4 years. June meeting of AZ Wildlife Federation featured an annual awards program in which (for 2013-2014) they recognized Dick Fleischman and Henry Provencio as Government-employee conservation leaders.

(Pascal B erlioux) ECO has been working with the Natural Resource Working Group and Apache-Sitgreaves NF to raise awareness about the "E. Side" industry shortfall issue. Also working with

ADOT and the Governor's office to increase the "wet limit" on the 4FRI logging trucks to help deal with that transportation problem—also considering a pilot project on the Mogollon Rim to allow ADOT to study the impact of an increased wet limit.

(Eli) He has been moving forward with the MNA on a second public event in August/September to coincide with the final ROD release.

(Paul Summerfelt) by week's end the Flagstaff Watershed Protection Project EIS will be released and will be followed by public meetings at the Aquaplex.

(Sharon Masek-Lopez) The ERI and SRP have signed a contract for the Paired Watershed Study and two side studies.

11:55 Action Items and adjourn

Action Item	Lead	Status
1. Post revised 4FRI resolution to BASECAMP and provide Stakeholder comment period until July 4th	Steve Gatewood	
2. Post CG and GEPAZ presentations from 6.25 meeting on BASECAMP	Eli	completed
3. MPMB to report on final recommendations for 2014-15 task order pre-treatment monitoring at the July SHG meeting	MPMB	
4. USFS to begin providing written SHG monthly updates, and will include task orders issued, notice to proceed, and completed … and also Rx, burns, fires	Dick	
5. Post 4FRI SHG 2014 progress report on BASECAMP	Buck	completed
6. Facilitation quote and contract for Buck	Dick	
7. Governor's Group to meet with the LAM on preponderance tree	Ethan & Amy	
8. Post the CG Technical Plan to BASECAMP	Eli	completed

12:30-2:30pm light lunch/open house at GEPAZ offices, 1645 S. Plaza Way, Flagstaff

NEXT 4FRI STAKEHOLDER GROUP MEETING WILL BE AT THE WINSLOW CHAMBER OF COMMERCE ON JULY 23RD

Process for approving minutes:

1. Note-taker sends draft minutes to Co-Chairs and facilitator < 48 hrs. following meeting
2. Co-Chairs and facilitator respond with edits (if needed) < 48 hrs. of receiving minutes
3. Note-taker incorporates edits & posts draft minutes to BASECAMP < 48 hrs. of receiving edited minutes
4. Draft minutes are approved (with additional edits as necessary) at next Stakeholder Group meeting
5. Note-taker posts Final Minutes to BASECAMP as PDF