Appendix B: Workshop Results

Cultural Resources Working Group, 12-14-2020
Page 1

Overall Methodology

Caltrans asks: will we need more collaboration / interim meeting prior to March workshop?

Maybe yes. It may depend on the participation of Tribes in the next few meetings. Will the results be shared out from all the meetings? (Caltrans response: Yes.)

Of value; cannot move forward without tribes' participation

Do think it would be valuable.

Would be valuable ✔

General Comments / Questions

Add socioeconomic costs beyond just fiscal?

Close coordination with tribes is necessary

Long-Term Safe, Reliable Roadway

Criteria	Performance Measure	How Measured
Road closure	Probability of long-term closure	Expert-based risk assessment including probability of deep ground displacement
Traffic mobility	Probability of lane reduction and mobility impact	Expert-based risk assessment including probability of unmitigable landslide activity / hydrogeological changes

Reduce Maintenance Costs

Criteria	Performance Measure	How Measured
Maintenance cost	Probability of increased maintenance costs	Expert-based risk assessment including probability of unmitigable earth movement

Criteria: Road closure
Performance Measure: Probability of long-term closure

No concerns about this particular performance measure.

Yes, comfortable with this metric

Thumbs up

Criteria: Traffic mobility
Performance Measure: Probability of lane reduction and mobility impact

No concerns with Traffic Mobility as performance measure ✔✔

Criteria: Maintenance cost
Performance Measure: Probability of increased maintenance costs

maintenance costs should be a performance measure moving forward

Thumbs up ✔✔

Protect the Economy

Criteria	Performance Measure	How Measured
Capital costs	Construction cost (millions)	Engineers' Order of Magnitude estimate
Mitigation costs	Mitigation cost range (high / medium / low)	Expert environmental estimate with historical cost data
Litigation costs	Risk of litigation (millions)	Risk based on costs of delay and level of potential controversy

Criteria: Capital costs
Performance Measure: Construction cost (millions)

Looks good, thumbs up

Criteria: Litigation costs
Performance Measure: Risk of litigation (millions)

No comments

Criteria: Mitigation costs
Performance Measure: Mitigation cost range (high / medium / low)

no concerns. However I'm waiting for some other indirect costs to see if they are considered later

Includes socioeconomic costs beyond fiscal concerns

This is just environmental?

Response: Could include ROW, utilities, but largely cost of mitigating environmental impacts

Thumbs up, Looks good

Add socioeconomic costs beyond just fiscal?

If adding a new metric, consider how to mitigate

Also includes cost of cultural mitigation

Protect Natural Resources

Criteria	Performance Measure	How Measured
Trees / Forests	Old growth redwood forest (acres)	Aerials / field review information
	Mature mixed coniferous forest (acres)	
	Young growth / mixed forest (acres)	
	Other types, i.e., coastal scrub (acres)	
Habitat	Marbled murrelet habitat (acres)	Aerials / existing reports
	Marten/fisher habitat (acres)	
	Northern spotted owl habitat (acres)	
Wildlife connectivity	New habitat islands generated (acres)	Aerials
Recreational resources	Number and type of sites / trails affected	Aerials / LiDAR

Criteria: Trees / Forests

Criteria: Trees / Forests
Performance Measure: Old growth redwood forest (acres)

- Just by acres? Or by trees?
- Suggest potentially doing so by tree; an individual tree can be a habitat for species
- Depends on the situation
- What is the definition of old growth?
- Size of individual trees needs to be captured; public is responsive to big trees regardless of age
- Add DBH or some kind of measure
- Crosses line between natural & cultural resources; will be tricky to evaluate
- Recent point of contention in considering removal of one tree
- Caltrans: Have tree counts w/diameters for some areas
- Don't have count for Green Diamond; will count every tree during environmental process

Criteria: Trees / Forests
Performance Measure: Other types, i.e. coastal scrub (acres)

- By adding "other types" you seem to cover all types

Criteria: Trees / Forests
Performance Measure: Young growth / mixed forest (acres)

- No comments

Criteria: Trees / Forests
Performance Measure: Mature mixed coniferous forest (acres)

- No comments

Criteria: Wildlife connectivity
Performance Measure: New habitat island generated (acres)

- No comments

Criteria: Habitat

- Consider changing measurements on habitat from acres to trees
- Or both trees and acres depending ...
- what about plant communities not trees, wetlands, etc...
- Again, plants may be cultural resources as well

Criteria: Recreational resources
Performance Measure: Number and type of sites / trails affected

- Will any new opportunities be added?
- This seems to speak to existing sites / trails only
- Road originally created for tourists, need to consider those resources

Protect Cultural Resources

Criteria	Performance Measure	How Measured
Cultural resources	Expert assessment of risk	Record search and pedestrian survey

Criteria: Cultural Resources
Performance Measure: Expert Assessment of Risk

- Possible approach: preliminary info, 22 sites and 18 isolates
- Not all sites have equal value by size, significance, etc.
- Project in D9: had to do least risk analysis with ranking/scoring system for site types
- Chart created by Jay King, D9
- Categories per amount / type of artifacts, complexity, etc.
- Historics more difficult to quantify
- Tribes may object to sites being ranked
- Rankings may be too subjective; but sites do not have equal value
- May be able to look at acreage
- Find way to assess potential mitigation, cost, timeline, etc.

- Like idea of categorizing or ranking sites, but need tribes involved to discuss
- Need to know how tribes assign value and how the sites relate to each other
- Need feedback from tribes on cultural significance of plant populations
- Consider how visual attributes of resources are affected
- Ethnographic studies assessing indirect effects to resources
- E.g., mythological connections to specific locations
- Must consider beyond bounds of alignments
- Who considers these resources valuable and how are they valuable?
- Go deeper than standard archeological info and consider it

- Caltrans: Is it reasonable to take all info and assign a high / medium / low value?
- A matter of building relationship among committee, clear and open communication
- Will take some work and creativity to get there; can only be achieved through consistent open communication
- Group has been doing well so far
- Agreed on working well as group, understanding issues holistically
- Still in midst of collecting info; values identified will change
- In process of developing understanding; work in progress

- Another approach: use sensitivity model developed in D9
- Takes distance to water, slope, geology, etc. into account
- Only a few areas are high sensitivity by that metric
- Fairly easy GIS analysis; also useful for finding deposits during construction
- Could be helpful with pre-contact archeological info
- Other types of sites that need to be gauged; harder to determine types of risks

- HNTB: How would ranking approach work best?
- Create chart and submit to tribes or start from scratch?
- How much detail to go into?
- Participant responses: Hard to state what works best; tribal partners need to speak for themselves
- Requires close coordination with tribes
- Have follow-up conversations if necessary
- Leads back to mitigation and potential costs for cultural mitigation
- May be more detailed than just 3 categories
- Overlap between environmental and cultural mitigation

Long-Term Safe, Reliable Roadway

Criteria	Performance Measure	How Measured
Road closure	Probability of long-term closure	Expert-based risk assessment including probability of deep ground displacement
Traffic mobility	Probability of lane reduction and mobility impact	Expert-based risk assessment including probability of unmitigable landslide activity / hydrogeological changes

Criteria: Road closure
Performance Measure: Probability of long-term closure

- acceptable no questions or comments
- No comment from several people
- Consider community impacts - economic and social
- Road closures usually mean slides & sediment potentially impacts to waters

Criteria: Traffic mobility
Performance Measure: Probability of lane reduction and mobility impact

- Consider community impacts
- Otherwise no comments

Reduce Maintenance Costs

Criteria	Performance Measure	How Mea
Maintenance cost	Probability of increased maintenance costs	Expert-based risk asse probability of unmitiga movement

Criteria: Maintenance cost
Performance Measure: Probability of increased maintenance costs

- No comments

Protect Cultural Resources

Criteria	Performance Measure	How Measured
Cultural resources	Expert assessment of risk	Record search and pedestrian survey

Criteria: Cultural Resources
Performance Measure: Expert Assessment of Risk

- Caltrans: must be sensitive to tribal preferences for information sharing
- No comments on cultural resources - should be handled in that working group.
- As long as the tribes' comments are addressed, the Corps has no comments on cultural resources.
- Thank you for your comments Jaime. No further comments from Elk Valley.
- Consider fisheries value to tribes and cultural resources.

Overall Methodology

- Group has captured "the big nasties:" things that can "blow up" project
- Need to be drivers for decision making
- Weighting some of these criteria can get us most of the way
- Caltrans: hope to use expert-based qualitative judgments
- Remember: worst case is just studying all 7 build alternatives - more expense and time
- Hoping that presentation of results will help eliminate some alternatives

General Comments / Questions

- Not sure where to mention multi modal issues as they relate to equity and the coastal bike trail. How would a tunnel accomodate these modes of travel?

Protect Natural Resources

Criteria	Performance Measure	How Measured
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Criteria: Trees / Forests

Criteria: Trees / Forests
Performance Measure: Old growth redwood forest (acres)

Caltrans: considering eliminating A2 and G2 which cut into old growth

consider the number of trees along newly created edges that may later die or be damaged or be considered hazardous

This category will be the biggest driver of any controversy or value, it should be heavily weighted beyond just acres. Young forest acres does not equal old growth forest.

Agree, you need a metric to assess value of the conditional difference provided by these forests

loss of carbon sequestration from trees removed

Edge effect if putting in a highway adjacent to old growth or other forest type.

Removal of old growth redwoods will be the primary metric for a MAMU, NSO , and marten ESA jeopardy analysis

Redwoods a resource you can't mitigate for - an invaluable resource

Agree, old growth impacts pose the highest risk to the project.

If acres of old growth forest used to determine the acres of old growth forest to be mitigated for, additional metrics of the characteristics of the old growth forest lost/impacted,

will need to be compared to any candidate 'old growth' forest that may be considered as mitigation habitat.

A qualitative assessment for the old growth is imperative on many levels.

Also affects water quality, habitat, etc. - important aspect to look at

Can aerial surveys and estimates be done based on mapping?

→

Caltrans: yes, we have aerials and tree counts in some areas; others would require on-the-ground surveys

Caltrans: hoping that acreage will serve as measurement to help screen

Does group feel that tree diameters are needed?

It may come down to measuring every tree

HNTB: that's the plan, question is whether now or later

Caltrans: in support of using tree counts for old growth only?

both are important - acres and individual trees

Does this consider just direct impacts of old growth forest lost or also the acres of new edge created be each alternative? An alternative creating more old growth edge than other may have a greater impact on trees and wildlife.

and the contiguous-ness of the acres. Either fragmented or continuous.

Caltrans: can't answer now but could consider - possibly more qualitatively

Acre descriptions (i.e. non tree counts) in the non old growth forest types should be suitable for this exercise.

Can tree counts in old growth and mixed forests be estimated from mapping resources?

Caltrans: somewhat; can look at crown diameters through LiDAR but diameter and shape requires looking on ground

Related to loss of carbon sequestration from loss of temperate rainforest are effects on climate change

Protect Natural Resources

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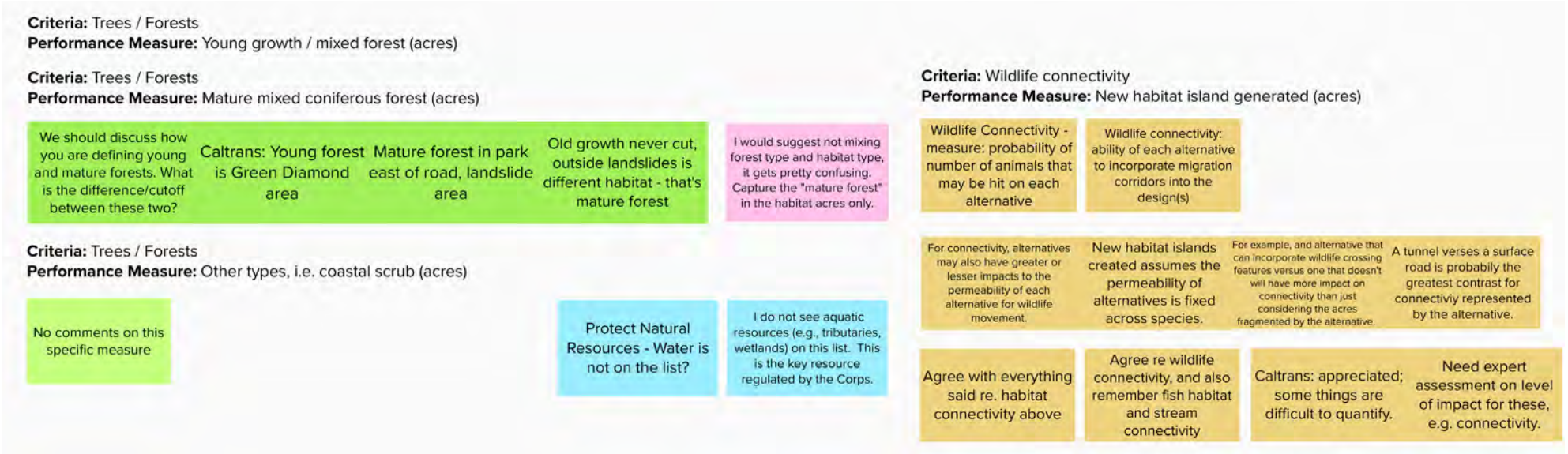

Protect Natural Resources

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Criteria: Habitat

Suitability of various ESA species

Agree with need for qualitative assessments in sufficient detail to determine habitat value for different species.

Agree, acres of habitat will have to be weighted because they are not equal across species.

Habitat - will you use other sensitive species as performance measures?

Will other sensitive species be considered?

Bats, plants, migratory nesting birds

amphibians - understudied

Response: Caltrans will consider others but these habitat areas will help determine alts to move forward

Need to come up with some umbrella species that capture different habitats that are essential to many interconnected trophic levels,.

We may need to give this some more thought - might be missing something by only considering those 3 species

The Coastal Act requires protection of all environmentally sensitive habitat areas (ESHAs) from non-resource dependent uses - hesitate to oversimplify between one sensitive species and another.

Would be helpful to know the difference in acreage of habitat impacts, perhaps a ranking of various "qualities" of ESHA (eg, o.g. redwoods).

Also, the Coastal Act has other provisions so it would also be important to evaluate the effects of various alternatives in relation to minimizing risks from hazards, maximizing public access, etc.

Need to evaluate what is most consistent with policies and resolve conflicts

Must look at hazards: e.g., how would on-alignment alternative affect risks from hazards?

Fishers aren't listed in NW CA

Criteria: Habitat
Performance Measure: Marbled murrelet habitat (acres)
Performance Measure: Northern spotted owl habitat (acres)

No comments specific to these measures

Criteria: Habitat
Performance Measure: Marten/fisher habitat (acres)

Martens and fishers: 1. have different habitat requirements

2. the value of the habitat impacted or mitigated for will have vastly different impacts for the overall conservation of these species.

(e.g., 5 acres of suitable marten habitat not equivalent to 5 acres of fisher habitat with respect to their impact of benefit for respective conservation)

For these reasons, they should really be considered separate performance measures.

Criteria: Recreational resources
Performance Measure: Number and type of sites / trails affected →

This may be controversial, but the recreational infrastructure DeMartin Backcountry Campground and the Coastal Trail that may be destroyed

or have to be moved is not extraordinarily important, it is only moderately important. They are not irreplaceable, could be modified.

noise effects to Mill Creek Campground

Disregard my comment on Mill Creek Campground - those alternatives have already been dropped

Long-Term Safe, Reliable Roadway

Criteria	Performance Measure	How Measured
Road closure	Probability of long-term closure	Expert-based risk assessment including probability of deep ground displacement
Traffic mobility	Probability of lane reduction and mobility impact	Expert-based risk assessment including probability of unmitigable landslide activity / hydrogeological changes

Criteria: Road closure
Performance Measure: Probability of long-term closure

Need a sustainable route

Looks good ✔

This is a really important, especially for schoolchildren, businesses, tribal offices in CC and Klamath

Plus safety, access to hospitals

agree with these thoughts re importance of sustainable route for access

Criteria: Traffic mobility
Performance Measure: Probability of lane reduction and mobility impact

Consider frequency of traffic impact

Fine - is this a measure of alternative as built? Caltrans response: yes, will be assessing each and comparing

Are they in landslide area and therefore still prone to possibility of lane reduction?

Is there a related metric of what percentage of time when there would be a lane reduction? →

Caltrans response: Believe it's still in same number but will have to clarify

Modeling what was done in expert-based risk assessment: probability of event w/ in time periods

So baseline for existing route would be 100% on this metric, correct?

Caltrans response: yes, no build as a baseline

This goes to ongoing maintenance and long term costs, Most sustainable route again. Look to avoid closures and possibility for re-routes once it is built

We do not want to shift the route and in ten years be back to tens of millions to maintain the new route after all the resource impacts to change the location

completely agree re prior comments. also an impact on travel time for the community of Klamath for essential services such as school, food, health care etc.

Don't want to be back in this same position we are in now where travel times are high

agree with thoughts re most sustainable route

Where is limit if running into complications once project is started? →

Caltrans response: Good question, haven't considered for this effort

Any alternatives have that risk. Considering litigation risk, for instance

Can build time for changing conditions into time to build metric

No cap to time for repairing existing location. Have not experienced lack of emergency funds

On construction, will document risk of changing conditions and apply for more $ if needed

Reduce Maintenance Costs

Criteria	Performance Measure	How Measured
Maintenance cost	Probability of increased maintenance costs	Expert-based risk assessment including probability of unmitigable earth movement

Criteria: Maintenance cost
Performance Measure: Probability of increased maintenance costs

Traffic mobility criterion goes to ongoing maintenance and long term costs, Most sustainable route again. Look to avoid closures and possibility for re-routes once it is built

This is a good measure

want to reduce maintenance costs especially in light of resource impacts associated with a new alignment

Seems fine but needs to be benchmarked against current maintenance costs

Response: would be benchmark used; have lots of data

Good with me, super-important for Caltrans

Nothing at this time

No comments

Overall Methodology

Are these criteria and measures for each alternative route? Answer: yes

criteria, most sustainable alignment, least resource impacts

If assessing impacts of each alternative, what area is being assessed - footprint / ROW or cumulative impacts for each alt? →

Caltrans response: for this tool, just looking at footprint / direct construction & long term impact

In environmental phase, must look at bigger picture

Need your help to determine critical criteria

yes, should focus on protection with realistic expectations based on cost to build. A no impact trillion dollar project might not be feasible ; -) ✔

On front end, based on geology; then look at impacts with regard to cultural & natural resources, activities, etc.

General Comments / Questions

I think this was very supportive, thank you very much

Protect the Economy

Criteria	Performance Measure	How Measured
Capital costs	Construction cost (millions)	Engineers' Order of Magnitude estimate
Mitigation costs	Mitigation cost range (high / medium / low)	Expert environmental estimate with historical cost data
Litigation costs	Risk of litigation (millions)	Risk based on costs of delay and level of potential controversy

Criteria: Capital costs
Performance Measure: Construction cost (millions)

- No comments at this time from most
- Are mitigation costs rolled into this criteria? Response: no, they're separate
- Is "sustainable" interpreted as reliability or sustainability for the use of resources? Response: will consider whether it's sustainable and costs of maintaining
- Add duration of construction?

Criteria: Mitigation costs
Performance Measure: Mitigation cost range (high / medium / low)

- Count on 20% of project cost for mitigation
- Avoid cultural resources as much as possible rather than mitigation
- What will happen to the existing 101? Will there be a cost to take it down? → Response: still uncertain; part of mitigation potential
- May use as recreational resource. Varies from alternative to alternative
- What maintenance costs are needed for these new uses?

Criteria: Litigation costs
Performance Measure: Risk of litigation (millions)

- Agreed upon actions on the front end, stick to decisions where geology allows, continue communications and we should not have litigation.
- I agree, also keeping local tribes included in the process and having real meaningful consultation will help with not having litigation
- Litigation and mitigation costs may not be mutually exclusive; costs for one may reduce other
- How will you gauge litigation costs? Based on historic cases or just projections? Response: Historic #s and looking at costs to repair this road; e.g., $10M per year
- Or could make high / medium / low determination of risk. #s are estimated
- Believe this can be ranked as H / M / L risk - a meaningful criterion for this objective

Protect Natural Resources

Criteria	Performance Measure	How Measured
Trees / Forests	Old growth redwood forest (acres)	Aerials / field review information
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Habitat	Marbled murrelet habitat (acres)	Aerials / existing reports
	Marten/fisher habitat (acres)	
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Wildlife connectivity	New habitat islands generated (acres)	Aerials
Recreational resources	Number and type of sites / trails affected	Aerials / LIDAR

Agree on avoidance, not mitigation for both cultural and natural resource impacts

Natural resources fall under cultural for tribes

Seek ways to use mitigation to enhance habitat / natural resources, for instance thin conifers in old growth areas

Can look at an area based on what it contains but must consider significance for tribes, link to cultural resource value

Criteria: Trees / Forests

Criteria: Trees / Forests
Performance Measure: Old growth redwood forest (acres)

Question: Where will the old growth logs be going? Local Tribes? → Response: have not yet considered; big question requiring work with parks and tribes

we have talked about in the cultural resource group, could be part of mitigation

We've discussed it and noted the desire of tribes to be provided any old growth

Suggest: give to tribes to create artworks to be displayed

Parks have agreements re old growth wood, will honor

Elk Valley is absolutely interested in obtaining redwood resources if/ when available

Other items Caltrans is considering related to comment re wood for artworks are aesthetic project treatments to highlight tribal their ancestral connections

Criteria: Trees / Forests
Performance Measure: Young growth / mixed forest (acres)

Criteria: Trees / Forests
Performance Measure: Mature mixed coniferous forest (acres)

Criteria: Trees / Forests
Performance Measure: Other types, i.e. coastal scrub (acres)

No comments regarding these specific criteria

Protect Natural Resources

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Recreational resources	Number and type of sites / trails affected	Aerials / LiDAR

Criteria: Habitat

- No comments on specific habitats
- Could impact multiple species; would have to determine if habitat is impacted by each alt and characteristics such as tree type
- Very important for other species as well, e.g. elk
- Consider creative mitigation, ways to improve habitat in nearby areas
- Can't ignore aquatic habitat even if it doesn't impact specific species; may be downstream impacts
- Measure risk of sediment delivery to stream system; more watercourse crossings, more impact
- Plus volume, scope and size of watercourse impact
- Agreed. Biological group will be looking at this
- Adding, reaching out to Tribal Natural Resources to see what they have been doing and how they can assist the project
- Should already be staff from tribes in those groups
- Proposed: create category for # of stream crossings
- Can more deeply investigate water impacts in later stages
- Stick to aquatic resource impacts as a criterion; stream crossings are a specific metric, not a major category
- May also be influenced by other factors re. water
- This is a multi-dimensional consideration
- Amount of fill may be a factor, for instance; broaden the metric to be multi-dimensional
- Must consider more than just # of crossings
- Agreed, must take into consideration
- Like idea of adding this performance meausre, agree more complex than just # of crossings

Protect Natural Resources

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Recreational resources	Number and type of sites / trails affected	Aerials / LiDAR

Criteria: Wildlife connectivity
Performance Measure: New habitat island generated (acres)

Good to see this metric, nothing to add

connectivity will be critical for any alternative

Criteria: Recreational resources
Performance Measure: Number and type of sites / trails affected

Access to these resources must be considered; connectivity for humans to be considered along w/ wildlife

Agreed; performance measure is looking at existing

Criterion very easily mitigated; many opportunities to improve access and recreational opportunity in project area

Therefore almost beside the point

Agreed with both; add an element of tribal access

Some tribal routes already impacted; those areas still accessed, even if pre-contact

Agree, accessibility was one of the opportunities overlooked with the Prairie Creek bypass

Important; consider impacts to vista points, parking areas, etc.

Don't just provide another opportunity for people to trash area

Opportunity to include that component; think of area going through, magnitude of potential impacts

More than just road going through

Protect Cultural Resources

Criteria	Performance Measure	How Measured
Cultural resources	Expert assessment of risk	Record search and pedestrian survey

Criteria: Cultural Resources
Performance Measure: Expert Assessment of Risk

Question: Where will the old growth logs be going? Local Tribes?

Caltrans response: have not yet considered; big question requiring work with parks and tribes

we have talked about in the cultural resource group, could be part of mitigation

We've discussed it and noted the desire of tribes to be provided any old growth

Parks have agreements re old growth wood, will honor

Elk Valley is absolutely interested in obtaining redwood resources if/ when available

Suggest: give to tribes to create artworks to be displayed

Other items Caltrans is considering related to that suggestion are aesthetic project treatments to highlight tribal ancestral connections

Redwood to tribes could fall under mitigation ✔✔

Natural resources fall under cultural for tribes

Can look at an area based on what it contains but must consider significance for tribes, link to cultural resource value

Agreed re protecting access for humans; add an element of tribal access

Some tribal routes already impacted; those areas still accessed, even if pre-contact

Can look at an area based on what it contains but must consider significance for tribes, link to cultural resource value

Avoid cultural resources as much as possible rather than mitigation

Agree on avoidance for both cultural and natural resource impacts

Elk Valley would appreciate continued consultation as they were unavailable for Cultural Resources Group Monday

Tribes don't distinguish between sites; need to take oral histories, traditional cultural landscape, etc. into account

Factors on a larger scale and how individual sites play into context of tribes

Impact to cultural resources and properties very important criterion to tribes

Hard to break resources down into individual sites

Consider having a cultural monitor on hand

Caltrans: acknowledged and will be key to project; talk to Amanda from Tolowa who knows details of how we'll proceed

Appreciate tribe's trust in the process

Caltrans doing a good job reaching out to all, treating with sensitivity and respect

Agree with what was said; can consider from a material perspective, but also consider holistic significance of area, connection to other areas

Consider how areas relate to each other re. access, etc.

May not be able to specify precise considerations

Have big picture in mind, not just from a material perspective, informed by tribes

Long-Term Safe, Reliable Roadway

Criteria	Performance Measure	How Measured
Road closure	Probability of long-term closure	Expert-based risk assessment including probability of deep ground displacement
Traffic mobility	Probability of lane reduction and mobility impact	Expert-based risk assessment including probability of unmitigable landslide activity / hydrogeological changes

These 2 criteria and metrics make sense.

Criteria: Road closure
Performance Measure: Probability of long-term closure

Makes sense ✔

No comment

These 2 criteria and metrics make sense.

What is the duration of the "closure" used in the metric? They make sense, just wondering.

Caltrans: not certain, but think approximately a week used in study - will get back to you

This seems appropriate and straight forward

Might be good to differentiate short term closure and long term

Caltrans asks: Does a week make sense? →

I would be concerned of long term of more than 1 week

Short term 1 week or less long term longer than 1 week

is there a way to keep closure to part of a day period?

Caltrans response: yes, if construction closure; may be longer if not under our control

Criteria: Traffic mobility
Performance Measure: Probability of lane reduction and mobility impact

This seems less important than long-term closure. We have lived with this as the "normal" for a while now. Not ideal, but not the worst!

Overall Methodology

Seems we're always behind on info; would be more effective if we had info prior to meetings (e.g., geotechnical)

Protect the Economy

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Capital costs	Construction cost (millions)	Engineers' Order of Magnitude estimate
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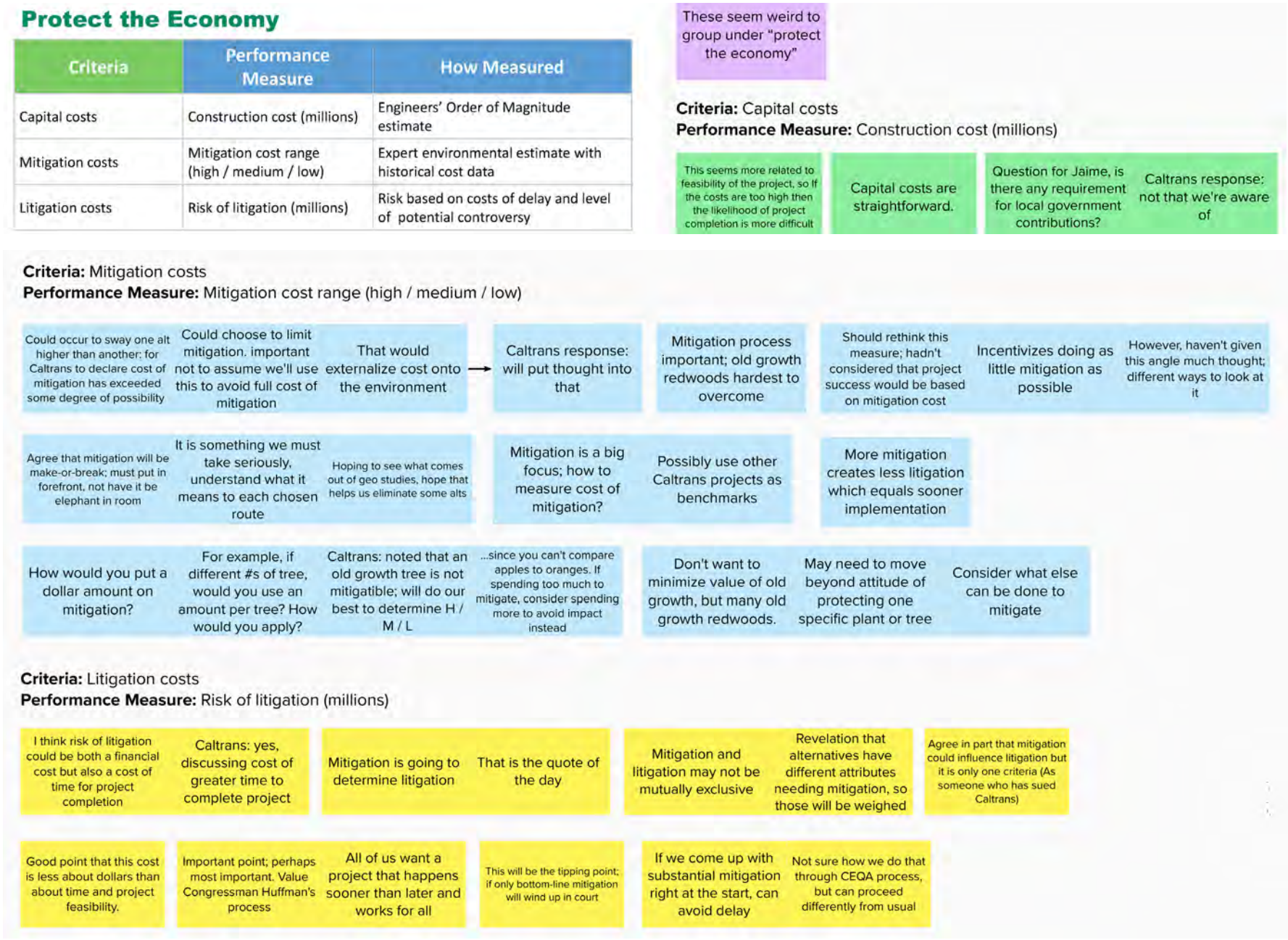

Criteria: Trees / Forests

Criteria: Trees / Forests
Performance Measure: Old growth redwood forest (acres)

Old growth can be harmed by adjacent effects, not just by cutting.

For instance, on Hwy 101 along Ave of Giants show tree die off due to the changes in ground water flow and ambient moisture availability.

That area is a 4 lane hwy and many old growth trees have died back 50-100 feet. Dead tops abound.

Mitigation process important; old growth redwoods hardest to overcome

Old growth redwood is going to be the key to this project.

Criteria: Trees / Forests
Performance Measure: Mature mixed coniferous forest (acres)

Criteria: Trees / Forests
Performance Measure: Young growth / mixed forest (acres)

Criteria: Trees / Forests
Performance Measure: Other types, i.e. coastal scrub (acres)

No specific comments on these measures

Criteria: Habitat

Habitat continuity/ performance is an important, albeit harder to quantify, criteria

Some of the mitigation options may include adding protections to some of these habitats.

i.e., ..such as a purchase of lands from GDRC that have Murrelet habitat in temporary protection that if added to the park would be more permanent protection.

I think considerations of water (stormwater runoff, erosion, stream alteration, etc.) should be included.

Also wondering why sensitive plants aren't a consideration? I realize there are many areas of NR that could be included, but these seem key

I had a similar thought. In addition to acres, measures of success could be based on hydrologic function and forest ecosystem function

Agree with adding an aquatic criteria as discussed yesterday (sedimentation into streams).

To the extent that there are large amounts of fill to be deposited elsewhere, are there specific measures for alts where that would be criterion? →

HNTB: We are calculating cut and fill; not certain where it's going but important to consider and evaluate

Great point about the spill disposal sites. If we look regionally there may be projects in need of some fill.

The trick will be timing so that when we need to dispose there are areas ready to accept the fill.

Protect Natural Resources

Criteria	Performance Measure	How Measured
Trees / Forests	Old growth redwood forest (acres)	Aerials / field review information
	Mature mixed coniferous forest (acres)	
	Young growth / mixed forest (acres)	
	Other types, i.e., coastal scrub (acres)	
Habitat	Marbled murrelet habitat (acres)	Aerials / existing reports
	Marten/fisher habitat (acres)	
	Northern spotted owl habitat (acres)	
Wildlife connectivity	New habitat islands generated (acres)	Aerials
Recreational resources	Number and type of sites / trails affected	Aerials / LIDAR

Criteria: Wildlife connectivity
Performance Measure: New habitat island generated (acres)

Habitat continuity/ performance is an important, albeit harder to quantify, criteria

Glad to see connectivity in there

Criteria: Recreational resources
Performance Measure: Number and type of sites / trails affected

new access can be more thoughtfully planned and make it better so that the highway isn't a "wall" for recreation and habitat connectivity both.

These two criteria makes sense to me but I'm curious what measuring wildlife connectivity with acres look like.

Generating new habitat islands would not guarantee increased wildlife habitat connectivity.

Where are cultural trails included?

Caltrans: developed list at other meetings, will share

On recreational access I think everyone's assumption is that the project can mitigate to improve whatever is impacted and leave it better than before

Opportunity to create new recreational opportunities / enhance access to this resource

General Comments / Questions

Last Chance Grade Working Group Alternative Workshop 1 - Polling Results

1. Overall Methodology: What is your level of support for the overall process that has been described today?	Highly supportive		Somewhat supportive		Neutral		Somewhat		Do not support		Total #
	%	#	%	#	%	#	%	#	%	#	
Cultural Resources Working Group	33%	2	50%	3	17%	1	0%	0	0%	0	**6**
Biological Resources Working Group	46%	6	23%	3	31%	4	0%	0	0%	0	**13**
LCG Partners	100%	6	0%	0	0%	0	0%	0	0%	0	**6**
Huffman Stakeholder Group	50%	5	40%	4	0%	0	10%	1	0%	0	**10**

2. Objective: Long-Term Safe, Reliable Roadway - To what degree do you support the revisions as discussed for the Objective: Long-Term Safe, Reliable Roadway?	Highly supportive		Somewhat supportive		Neutral		Somewhat unsupportive		Not supportive - revisions do not address my concerns		Total #
	%	#	%	#	%	#	%	#	%	#	
Cultural Resources Working Group	33%	2	17%	1	50%	3	0%	0	0%	0	**6**
Biological Resources Working Group	56%	9	25%	4	19%	3	0%	0	0%	0	**16**
LCG Partners	100%	6	0%	0	0%	0	0%	0	0%	0	**6**
Huffman Stakeholder Group	33%	3	44%	4	22%	2	0%	0	0%	0	**9**

3. Objective: Reduce Maintenance Costs - To what degree do you support the revisions as discussed for the Objective: Reduce Maintenance Costs?	Highly supportive		Somewhat supportive		Neutral		Somewhat unsupportive		Not supportive - revisions do not address my concerns		Total #
	%	#	%	#	%	#	%	#	%	#	
Cultural Resources Working Group	33%	2	17%	1	50%	3	0%	0	0%	0	**6**
Biological Resources Working Group	36%	5	43%	6	21%	3	0%	0	0%	0	**14**
LCG Partners	100%	6	0%	0	0%	0	0%	0	0%	0	**6**
Huffman Stakeholder Group	22%	2	33%	3	44%	4	0%	0	0%	0	**9**

4. Objective: Protect the Economy - To what degree do you support the revisions as discussed for the Objective: Protect the Economy?	Highly supportive		Somewhat supportive		Neutral		Somewhat unsupportive		Not supportive - revisions do not address my concerns		Total #
	%	#	%	#	%	#	%	#	%	#	
Cultural Resources Working Group	0%	0	50%	3	50%	3	0%	0	0%	0	**6**
Biological Resources Working Group	21%	3	50%	7	29%	4	0%	0	0%	0	**14**
LCG Partners	100%	6	0%	0	0%	0	0%	0	0%	0	**6**
Huffman Stakeholder Group	25%	2	50%	4	13%	1	13%	1	0%	0	**8**

5. Objective: Protect Natural Resources - To what degree do you support the revisions as discussed for the Objective: Protect Natural Resources?	Highly supportive		Somewhat supportive		Neutral		Somewhat unsupportive		Not supportive - revisions do not address my concerns		Total #
	%	#	%	#	%	#	%	#	%	#	
Cultural Resources Working Group	0%	0	50%	3	50%	3	0%	0	0%	0	**6**
Biological Resources Working Group	27%	4	47%	7	27%	4	0%	0	0%	0	**15**
LCG Partners	100%	6	0%	0	0%	0	0%	0	0%	0	**6**
Huffman Stakeholder Group	38%	3	25%	2	38%	3	0%	0	0%	0	**8**

6. Objective: Protect Cultural Resources - To what degree do you support the revisions as discussed for the Objective: Protect Cultural Resources?	Highly supportive		Somewhat supportive		Neutral		Somewhat unsupportive		Not supportive - revisions do not address my concerns		Total #
	%	#	%	#	%	#	%	#	%	#	
Cultural Resources Working Group	0%	0	100%	6	0%	0	0%	0	0%	0	**6**
Biological Resources Working Group	33%	4	33%	4	33%	4	0%	0	0%	0	**12**
LCG Partners	100%	6	0%	0	0%	0	0%	0	0%	0	**6**
Huffman Stakeholder Group	63%	5	0%	0	38%	3	0%	0	0%	0	**8**