Sensitive Natural Communities Webinar, December 7th, 2021

Hosted by CDFW, VegCAMP, and the CNPS Vegetation Program

Will the webinar be recorded and/or the slide decks be sharable?

During the webinar, we were told that the session was not being recorded. Fortunately, it was in fact recorded and we will be able to provide the recording to the public. However, it may take a while for us to complete the transcript required for publication. We appreciate your patience while we continue to work on this.

What are the minimum mapping units on a large-scale project? What's the MMU of an association in an alliance? What is the smallest possible minimum mapping unit?

There is distinction between minimum mapping unit versus minimum stand size. These two concepts are often conflated, when really, they are quite distinct from each other. Also, what holds true for Alliance also holds true for an Association. Please note: An Association may be 'sensitive' or have a rank of S1, S2, or S3, while an Alliance may be more 'common' (if more than one Association is nested within it and combined those Associations make up more acreage, extent, polygons, and overall occurrences, etc.). Thus, mapping at the finest scale, Association level, will allow users to evaluate the sensitive resources across the landscape more easily than if only an Alliance map exists.

Minimum mapping Unit (MMU)

The minimum mapping unit (MMU) is a rule for mapping and is defined as the smallest mappable polygon within a mapping project. Your MMU is a rule applied when creating a vegetation map. The rules are made before mapping to produce a consistent standard across the vegetation map. It is especially important to establish MMU rules for consistency across the mapping project, for remapping for change detection (and repeat mapping processes), and for documenting the process in your metadata.

Your minimum mapping unit or size is really driven by 3 things:

1. The resolution of the aerial imagery and GIS inputs used as your basis for mapping.
2. The amount of time (& money) available in your project
3. The classification level in which you are mapping to (alliance and/or association level)
4. The level of detail desired/needed by agency and/or client.

VegCAMP and other federal agencies offer guidance for general minimum mapping unit sizes found to be useful for mapping mid to fine-scale vegetation. Our standards state that minimum mapping units (MMU) vary depending on the size of the project but should not be greater than 10 acres and is usually 1 or 2 acres; wetlands and other special types are mapped at 1/4 acre.

These are upper limit guidelines. For project specific mapping, smaller minimum mapping unit sizes are common.

Note: Recently, MMU for County-level mapping projects have typically been 1/4 acre to 1 acre (1000m2 to 4,000 m2) per State standards. However, for Project level projects MMU can be 1/4 (1,000m2) or 1/8 acre (500m2). Please note: a vegetation sample and classification have no minimum unit, we can sample and define vernal pool associations at 10 m2, grasslands at 100m2, shrublands and riparian forests at 400m2, and upland forests and woodlands at 1,000m2 as long as those vegetation types being sampled are repeating, differentiable patterns across the landscape. Thus, Points as well as Polygons (at <1/4 acre, or <1,000m2) can be used to represent Sensitive natural communities.

Minimum stand size

The minimum stand size is a rule for sampling stands of vegetation in the field. A **stand of vegetation** is defined as a spatially continuous unit of vegetation with uniform composition (i.e., species are evenly distributed or are consistently patchy), structure, and environmental conditions. Thus, the stand type is determined by the species composition, the structure, and environmental conditions…just as stated in the definition. But the size variability will to be tied to ecological factors such as the dominant life form of the stand (i.e., trees, shrubs, herbs, non-vascular) which contribute to the overall ecology of the community.

For example, stand size a blue oak woodland would need to be a fairly large to capture the species composition and structure of widely spaced oaks compared to a single, small ring around a vernal pool characterized by annual herbs. The intactness of the community is important. To help guide you in determining if your patch of vegetation is large enough to be a definable unit of vegetation, please refer to the membership rules or community type definitions outlined in the Manual of California Vegetation or an associated project report. For example, the membership rules for *the Quercus douglasii Forest and Woodland Alliance* indicate that *Q. douglasii* needs to have at least 50% relative cover in the tree canopy or at least 30% relative cover when with other specified trees depending on the geographic location. If this rule fits what you are seeing in the field, and it meets the definition of a stand (see above) you likely have a legitimate stand of vegetation.

When VegCAMP and CNPS define natural communities through data analysis, we take the ecological variability into consideration, and it will be reflected in the alliance description, plus membership rules. However, if classification data is lacking for your area of interest, you might not see a membership rule that applies to your specific stand of interest. If you believe this to be the case or you cannot determine the vegetation type for whatever reason, please reach out to VegCAMP and/or CNPS vegetation staff.

Are all natural community rarity ranks assessed and potentially revised on a regular basis, or does this just occur for specific alliances when new information is obtained?

VegCAMP and CNPS are ranking or re-ranking using the NatureServe Rank Calculator as new information (e.g., at least 25% more info for a type) is available and compiled, and/or when vegetation is newly defined. Though, as we are completing eco-regional projects, we also are beginning to re-evaluate ranks, when we have time.

Why does anyone use vegetation communities, when CDFW uses only vegetation? Vegetation is a group of plants on the landscape. A plant community is a superorganism composed of plants that undergoes change through time. Vegetation better describes reality, but vegetation and plant community are erroneously thought to be synonyms. What is a community of vegetations? You may want to direct your attention to how often people use 'vegetation community'' when speaking. If you won't speak up for the science, who will? Incidentally, I got my masters in the field.

We are using the term Vegetation or Vegetation type, a group of plants on the landscape that occur together based on similar plant species composition. This reference provides a summary of this, as do other articles and reports by the Ecological Society of America Vegetation Panel, nationally.

How do you define a stand when you have at least 50% redwood and at least 15% bishop pine (a community according to online MCV)?

You can use the Membership rules for the given alliances from local reports or the Manual of CA Vegetation online to help answer this. For *Sequoia sempervirens* (redwood) Alliance, here is one rule: *Sequoia sempervirens* > 50% relative cover in the tree canopy, or > 30% relative cover with other conifers... or with a lower tier of hardwood trees ... (Keeler-Wolf et al. 2003a, Evens and Kentner 2006) Thus, your example could key out to the Redwood alliance, and the *Sequoia sempervirens* - *Pinus muricata* Association would be the likely Association in the example that you've posed here.

Why do we use the terms alliance for the coarser scale and association for finer scale? Looking up the definitions I don't see the logic. I'm trying to find a way to remember which is which.

Alliance as a term in the English language has generally a broader more inclusive meaning than association E.G., "a union between people, groups, countries, etc." AS OPPOSED TO association: which is often defined as connection with person, group, or organization; connection between two things. Association implies a smaller grouping and less broad reaching than Alliance. You can review definitions for Vegetation Alliance and Association here:

https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities and here http://usnvc.org/data-standard/natural-vegetation-classification/

When looking to local experts, do you engage with local Indigenous groups as well?

Coordination with local indigenous groups is valued in vegetation classification and mapping efforts, and expanded collaboration is anticipated as local and regional relationships further develop.

Can you clarify the difference between count of polygons and occurrences?

Yes, for mapping, polygon breaks can occur due to differences in overstory cover as well as vegetation type. Adjacent polygons may be labeled with the same vegetation type if they have different cover values (e.g., shrub cover). For element occurrences in ranking, the same distance as CNDDB uses to determine separate occurrences are used. For example, if polygons/points are within 1/4 acre, then are considered the same occurrence. See page ten (10) in this document: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=181808&inline. This Heritage Methodology (dating back to the late 70's, and before we had high precision GIS) shows occurrences that are somewhat more generalized than individual polygons and group similar adjacent stands of the same type of vegetation together as a way to standardize the determination of number of occurrences.

How can we use rarity raking to strengthen CEQA commenting on significance of impacts?

Focus on the reason for a given conservation rank. The rank is a helpful descriptor, but distribution, rarity, threats, declines, and project impacts would be considered together in evaluating potential (significant) impacts. A compelling argument will include relevant and interrelated information.

Could you please elaborate on the difference/definitions of Association vs Alliance vegetation?

Alliances are higher-order taxonomic units than associations, just as genera are higher order than species. The relationships between associations grouped into the same alliance tend to include shared principal indicator species (often, but not always, among the most common or diagnostic in the dominant layer), but have different species or groups of species associated with them because of minor ecological differences between soils, exposure, moisture, etc. For example, a Blue oak Alliance contains associations with grassy understories and associations with primarily shrubby understories, based on soil texture differences. And yet blue oak alliance stands may include different types of shrubby species depending on further ecological differences that affect the species composition of shrubs under the blue oak trees, such as serpentine soil vs non-serpentine.

- Alliance – A classification unit of vegetation of low rank (7th level in veg classification hierarchy), containing one or more associations and defined by one or more diagnostic species, often of high cover, in the uppermost layer or the layer with the highest canopy cover. Alliances reflect physiognomy as well as regional to subregional climates, substrates, hydrology, and disturbance regimes (Jennings et al. 2006, FGDC 2008). The USNVC assigns Alliances a database code and scientific name.
- Association – A vegetation classification unit of low rank (8th level) defined by a diagnostic species, a characteristic range of species composition, physiognomy, and distinctive habitat conditions (Jennings et al. 2006). Associations reflect local topo-edaphic climates, substrates, hydrology, and disturbance regimes.

It was stated that only data you have is used in calculating the rarity ranking. Is there a place in the formula for the area of those stands in areas not yet surveyed? For example, much of California's redwood forest is within unsurveyed areas but we know through other sources that redwood covers much more area than its G3 S3 ranking would suggest. Is there a place in the formula for the area of those stands in areas not yet surveyed?

Because Threats and Quality/Integrity and Trends are factored into the rankings as well as overall acreage, redwood forest is designated as S3. We generally factor in information (both actual data and estimates based on general info like CalVEG data) to obtain estimates on acreage or occurrence, especially in areas with data gaps of fine-scale maps.

Why is an alliance not considered sensitive if all of its associations are considered sensitive?

It is usually the case that most alliances made up of rare associations are also rare themselves. However, since the range extent and number of occurrences of an alliance can sometimes be much broader and numerous than that of the associations under that alliance, sometimes the alliance will cross the threshold for these factors that determine it to be widespread and common enough to push the broader level out of the sensitive category. This implies that overall, across all associations, the alliance is at fairly low risk of extinction. Alliances sometimes include many associations, some of which could be very common and widespread, while others are very limited in extent or ecological amplitude. This is analogous to plant genera broken into species; some rare, some not.

I noticed that in the new BIOS 6, the "ds###" IDs are different. Do you happen to know what the "ds...#" is for this Vegetation (MCV/NVCS) Mapping Projects - California is in the new BIOS 6?

The dataset numbers are the same within both BIOS 5 and BIOS 6. So, a user should be able to search for ds…#'s they are familiar with in both versions and find the same results.

Forthcoming SNC layer in BIOS is very exciting!! Will there be an announcement of some kind when that is available?

Yes, a BIOS monthly report is posted that will highlight release of the SNC layer. The news may also be released in other outlets as well.

When the area I am interested in for SNC lists is not colored on the map, does that mean there aren't any SNC?

I believe you are referring to the DS515 layer: Vegetation (MCV / NVCS) Mapping Projects demonstrated in BIOS. This layer shows all VegCAMP and collaborators' existing and in-progress vegetation maps. The colors on the map do not refer to whether SNCs are present or not. In BIOS, the DS515 layer is color coded by project status and the extent to which the mapping project is compliant with our Survey of California Vegetation standards. This symbology illustrates whether a vegetation map exists in each area, not whether SNCs are present or not. The vegetation map can be further queried for known locations of SNCs, but because of the issues discussed (embedded sensitive associations under a non-sensitive alliance, minimum mapping unit for the vegetation map, and preciseness of imagery), users should be aware that the vegetation map may not fully characterize all occurrences of SNCs in each project area. If an area of interest (AOI) is outside of a mapped area and you want to get a better idea of potential SNCs that may occur there, a review of the SNC list on the VegCAMP website and a regional search of alliances through the MCV online, the references for associations on the MCV online, and some of the additional spatial information data sources will provide an idea of potential SNCs and known SNC locations for your AOI.

Is there guidance to help determine if a particular stand meets the criteria of a ranked sensitive community? For example, the urban streams I work on have reaches with characteristic Sycamore Alluvial Woodland (SAW) species, but lack the characteristic geomorphology, have high nonnative cover, and experience different threats than ranked SAW. How can I know (and demonstrate to others) whether these reaches are occurrences of sensitive SAW, or not, that are subject to additional protections?

It can sometimes be difficult to determine when a stand is meeting the definition of a particular community type. Especially when the stand is disturbed. The first thing you could decide is if the alliance membership rules listed in the MCV describes your stand. For example, a membership rule for *Platanus racemosa* - *Quercus agrifolia* Woodland Alliance (http://vegetation.cnps.org/alliance/67) states that *P. racemosa* needs to have 30% relative cover in the tree canopy. This membership rule is somewhat broad and should cover various settings and states of pristineness. For even more information about the variability of the type, the report that defined the membership rule (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18245&inline) includes a regional

description for the type and possibly review a stand table. If still unsure if the stand meets the definition after reviewing the membership rules and the references listed for the rules, please get in touch for clarification about the community type that best fits the stand and justification for why it fits that particular type. In this example given here, the stands may be of lower quality, but likely still fit as a sensitive SAW type. Those with high non-native cover may fit one of the associations such as *Platanus racemosa* / annual grass.

May be worth mentioning the CNPS MCV site is useful whether your area is mapped or not. Thanks so much!

This is true. Thanks for pointing that out. Even if a vegetation map is not available for your area of interest, the state-wide vegetation classification offered through the MCV online will describe types for your area. As mentioned in the introductory presentation, alliance level concepts are supposed to be comprehensive for the state, even for areas without complete data coverage. However, association level concepts in these areas may not yet be defined. Similarly, provisional alliance and association types may need more field research and mapping (and as such are provisional) to determine their concepts and occurrence in the state.

Wondering why the Quercus agrifolia, Arbutus, and Umbellularia association in Marin is considered sensitive or rare (S3)? Lay people and regulatory agencies think its common. I heard the criteria but some detail would be helpful.

This association may be locally common, but overall is not common statewide, or vulnerable at moderate risk. While S1 and S2 ranks are critically imperiled and imperiled, the S3 rank is still vulnerable and deemed sensitive and of high inventory priority.

In the case of Alliances that are defined by low minimum cover values (I'm thinking of the *Festuca idahoensis-Danthonia californica* association; >10% rel cover of D. californica) and have no criteria regarding the cover of other native species associated with it, is the model for defining this community essentially making Danthonia rare?

This association can certainly have a diverse number of native species, whereby in some stands, some of the other natives may even be higher cover than the diagnostics, in which *D. californica* et al. can fluctuate in space and time. Local reports such as in Marin Co. Vol. 2, show the range and variation of minimum and maximum cover values of each plant recorded, including the *Festuca idahoensis - (Danthonia californica - Koeleria macrantha)* Association can have variable cover of native species, though *F. idahoensis, (D. californica* and/or *K. macrantha)* are repeatably present. *Festuca, Danthonia,* and other native species share at least 10% relative cover in the herb layer to be in this type and those three diagnostics are often characteristically present. In addition, a variety of other native and non-native plants may be present.

How do you handle changes in the vegetation type over time when type conversion is occurring due to fire or other factors?

We inventory, map, and monitor vegetation in its current state, and can track patterns over time. For example, early seral scrub alliances such as *Lotus scoparius* (= *Acmispon glaber)* - *Lupinus albifrons* - *Eriodictyon* spp., may be present due to disturbance and may transition to another scrub or chaparral type over time.

Will the online MCV provide active links to source literature in the future? The bibliography contains many citations that are not available online that make looking up the association descriptions very difficult and sometimes impossible.

This is a goal but will take some time. If you have trouble finding a source, please reach out since an archive of most of the literature cited including grey literature is maintained (though some sources are not available digitally).

Do you attach a year to the definition of a particular vegetation type so the user knows how when the data supporting the definition was collected?

For Alliances, the *Manual of CA Vegetation* denotes the date when vegetation types were added to the Manual in our internal database (and online). For ranking, the date of ranking or re-ranked a type using the Rank Calculator. For Associations, our national partners at the National Vegetation Classification and NatureServe have Association definitions provided for some (NPS) CA types, where they also denote the date, and we internally store the date for ranking or re-ranking with Rank Calculator, too.

I'm curious what kind of compensatory mitigation you recommend for permanent and temporary impacts to sensitive natural communities.

Contacting CDFW staff in the region that would be reviewing your project is a good place to start. Generally, mitigating in-kind (like for like) and on site is preferred. It is important to ensure the proposed mitigation is feasible and effective.

In accessing BIOS, is there still a separate version for government users vs. the general public and does that prompt separate access instructions at the beginning? If so, what are key differences between the two types these days?

There is generally no difference in the quality or in any specific labeling or delineation between public versus government users for vegetation data layers. CDFW may make some recently completed BIOS layers, directly available to government or other users who may be performing scientific review of the map product or as an early release used specifically for government decision makers. In general, vegetation data layers are not considered restricted. Theoretically, the location of stands formed of sensitive natural communities may need to be “fuzzed” for the public, but this has not been invoked for CA vegetation. In most cases, for commercial users of BIOS accessing CNDDB data (species data rather than plant community data), location

information at the township/range section level may be suppressed for species vulnerable to threats, such as poaching (e.g., lily bulbs for horticulture or falcons captured for falconry). Additionally, there are a handful of data only available to CDFW staff, typically draft working files.

Could you advise on how to make a map [delineate polygons] in the field over a large area?

CNPS offers vegetation mapping workshops that are typically 3-4 days long. Although the pandemic has made it difficult to offer these the last few years, they will be offered again in the future. Please visit their website here https://www.cnps.org/education/workshops for a list of upcoming workshops. Generally, polygon delineation is a GIS exercise (performed in ArcMap or ArcGIS Pro or something similar) performed on the computer after a comprehensive vegetation classification for the area of interest is completed through data collection and analysis. A few acceptable methods exist for deriving the polygons. The following reports include a description of methods used: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=161736&inline or https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=191778&inline or https://sonomaopenspace.egnyte.com/dl/1SWyCSirE9

When evaluating potential impacts to sensitive plant communities, how is temporary vs permanent impacts defined and do temp impacts require avoidance/minimization or mitigation under CEQA? Would a project that temporarily disturbs the soil in a sensitive vegetation community be considered temporary?

Contacting CDFW staff in the region that would be reviewing your project is recommended. In some situations, temporary impacts have been described as impacts that will be self-restoring within one year. If soils disturbance occurs, it is important to consider the potential for introduction of invasive species. Baseline percent cover surveys and a mitigation measure with quantitative triggers (e.g., % cover) for restoration action (inv removal, native plantings, etc.) could be employed.

How does all this fit in with CNPS important plant areas?

Many sensitive natural communities are components of IPAs. Many species of rare or unusual plants grow in stands and are therefore, both sensitive natural communities, and are composed of individual species, which increase the biodiversity of IPAs. Because vegetation is composed of plant species, unusually environmentally sensitive vegetation of many kinds (e.g., composed of rare endemics, or common species which rarely aggregate in large stands) would be expected to justify the creation of IPAs. For IPAs currently, vegetation maps with S1 and S2 polygons are weighted more significantly than S3, and as compared to S4 & 5. Similarly, weightings for sensitive and rare species occurrences are weighted by their ranking levels as well.

Mitigation Concerns - How should we comment if it is highly unlikely that the government agency will monitor the successful mitigation efforts and/or the profile/actual permittee is known to not follow through with the mitigation efforts? For example, if the County routinely states that they neither have the time or money and/or if the permittee is part of a group that takes their grow monies and abandons the parcel. It would be great to have documented prior evidence to support these allegations, but that takes time to collect the data. Is there some way to force/encourage the government entity submitting their report to provide that evidence?

CEQA mitigation needs to be feasible and effective. A CEQA document should have a "Mitigation Monitoring and Reporting Program" that specifies the mitigation success criteria, timeline, and who is responsible for enforcing.

When using local classification reports to determine association, what aspects of stand tables is most important to use: constancy or typical species observed? Or?

Constancy, Avg and Rel Avg Cover, as well as Min and Max can be helpful. Please see the Modoc Plateau Vegetation Rollout introductory Presentation that was offered by VegCAMP and CNPS and was recorded on 10/2/2020 (time stamp 22:40) for a demonstration of how to utilize the stand tables from the reports.

Will projects that are exempt from CEQA under the SB-155 Public Resources trailer bill mean that surveys for special status plants and SNCs will not be required? Or can you comment on how this trailer bill might affect protection of special status plant species and SNCs?

Here is a link to a recent presentation on this CEQA exemption.
https://www.youtube.com/watch?v=_pNllTcexsE

Are there instances when CDFW would require protection of vegetation associations that have been planted as part of landscaping in a park or golf course for instance. Or does CDFW generally consider whether the community established "naturally". Does it matter? Would you consider the use/quality of the habitat to a make this call? Any other guidance on how such communities might be considered during environmental review?

It depends. A person could keep a record of what/when was planted as landscaping and that could be taken into consideration when assessing the significance of a future project's impact. Restoration if done well could possibly serve as an example of an occurrence of a Sensitive Natural Community (SNC). However, landscaping is not natural vegetation and therefore VegCAMP/CNPS does not typically classify, define, and rank these stands. However, some

restoration is hard to tell from native stands (especially in riparian settings), following several decades.

Is there a standard for classification of sparsely vegetated or unvegetated areas? "barren" vs. "unvegetated" vs. "bare" vs. "open sand" or other geological classification vs. "developed"?

Great question. Vegetation has generally been defined as present if there is as low as 2% cover of plants. However, some very sparsely vegetated desert badlands, or alpine rock outcrops, may have characteristic plant species growing on them, which still could be considered vegetation. The USNVC has designated Lithomorphic (rock-dwelling) class vegetation as commonly sparse. Still, there are some areas that are truly unvegetated and if designated on a map would be more properly called Unvegetated sand, rock, recently cleared, etc. You may find definitions here: https://www.fgdc.gov/standards/projects/vegetation/NVCS_V2_FINAL_2008-02.pdf , and in local reports.

- Non-vegetated — Used to classify lands with limited capacity to support life and typically having less than 1 percent vascular vegetative cover. Vegetation, if present, is widely spaced. Typically, the surface of barren land is sand, rock, exposed subsoil, or salt-affected soils. Subcategories include salt flats; sand dunes; mud flats; beaches; bare exposed rock; quarries, strip mines, gravel pits, and borrow pits; river wash; oil wasteland; mixed barren lands; and other barren land (adapted from NRI 2003). However, sometimes these lands may have non-vascular (lichen).
- Sparse – Used to describe individual layers of vegetation (tree, shrub, herb, or subdivisions of them) or a vegetation type (sparsely vegetated) where the average cover value is <2% absolute cover (though the range in cover could be <1-9% cover, or rarely higher in exceptional rain events).

For the Sonoma Co veg priority communities, seems like a bunch of regionally sensitive communities will not be protected since they are sensitive associations, and not sensitive alliances. Anything being done to try to incorporate those rare associations?

Great question. We must start somewhere, whereby there are a significant number of Alliances that have S3 ranking and below in Sonoma County. In time, with more input from the public and local biologists, if Associations are sensitive but an Alliance isn't, those could likely be considered by the Vital Lands initiative. If in a project area, there are rare Associations, then those should be represented in mapping and description of the site to help in guiding conservation and management actions over time.

Are these time scales when considering GIS data going to be shortened to consider the range shifts of plant communities in response to climate change? In your opinion, are these areas currently mapped frequently enough (do you have enough data sources temporally and spatially) to be able to tell the difference that changes are occurring across a few years' timespan? I'm not a plant person but I'm trying to get a sense of how well scientists are staying on top of how plants are responding to Climate Change in plant communities.

This will be a part of ongoing discussions with local County, State and Federal agency partners. If significant changes have occurred, then the efforts in County projects will be able to reproduce maps in 5-10 years, funding dependent. For example, Western Riverside County completed remapping of their lands after areas of significant post-fire change between 2005 and 2012. And the Santa Monica Mountains is a current location where fire ecologists and researchers have been studying change over time, especially because of the risk or invasion of non-native plant species. Some of this work on change detection can be done with remote sensing and analysis of imagery; however, a lot of it is being done with other techniques like drones, helicopters, and field-based data collection, too.

For almost all of these presentations working with GIS data, how is the data being managed in terms of time scales? Are older datasets, such as 10 years or longer being purged and excluded from these outputs? Ok. Thank you. So even old datasets are included in determining the outputs of ranges? Ok, thank you. It is interesting to see how other federal, state and NGOs are using available GIS data.

We keep all datasets, even those 10 years or older, since info is useful to assess trends over time. Yes, if that's all the available data that we have, we factor that in knowing that vegetation moves across space and time.

For Teresa Sholars: Were any of the terrestrial lichens included in alliance or association descriptions?

Moss and lichen are generally listed for the alliance and/or associations when they were significant (high cover and/or consistently present). The species of moss and lichen were not determined though. All the species of moss and lichen were not determined though in the most recent project, because of lack of time (and experience in identifying them to species for some of the data collectors). For some projects, though, it is recommended to get moss or lichen identified to species level, when possible, especially if they're diagnostic in determining an association. [Entities such as the US Forest Service and CNPS have done so when collecting data on fen / wet meadow vegetation, for example. and in the future, we'd hope that is done for the Mendocino cypress communities.]

How can we find the Mendocino Cypress mapping report?

See https://nrm.dfg.ca.gov/FileHandler.ashx

Please include ESHA resources. Thank you all!

https://www.coastal.ca.gov/laws/

https://www.coastal.ca.gov/meetings/workshops/

Additional links and resources:

https://www.cal-span.org/cgi-bin/archive.php?owner=CCC&date=2016-04-14&player=jwplayer

https://www.youtube.com/watch?v=ptUCqDfatq0

https://documents.coastal.ca.gov/assets/lcp/LUPUpdate/LUPGuidePartI_4_ESHA_July2013.pdf

https://www.coastal.ca.gov/meetings/workshops/2016/esha/JDD_ESHA__Workshop.pdf

https://dot.ca.gov/programs/environmental-analysis/coastal-program/coastal-act-policy-resource-information/esha