



SACRAMENTO STATE  
COLLEGE OF CONTINUING EDUCATION

CALIFORNIA NATURAL RESOURCES AGENCY - MONITORING AND STEWARDSHIP UNIT  
**Resources Agency Project Tracking and Reporting (RAPTR) System  
Stakeholder Workshop  
ACQUISITIONS & EASEMENTS**

**SUMMARY – DRAFT**

Wednesday July 15<sup>th</sup> 10:00AM-3:00PM

**Welcome and Introductions**

*Orit Kalman, facilitator, Sacramento State Consensus and Collaboration Program*

Ms. Kalman welcomed participants to the A&E meeting, the first of five workshops supporting development of the RAPTR system. She reviewed guidelines for remote participation during the meeting, as well as the workshop purpose, key questions being addressed, and the agenda.

The key questions for the workshop were:

- What common metrics could be tracked across similar project types to inform project-, program-, and bond-level analysis?
- Which metrics are most appropriate and realistic to track in a central system?

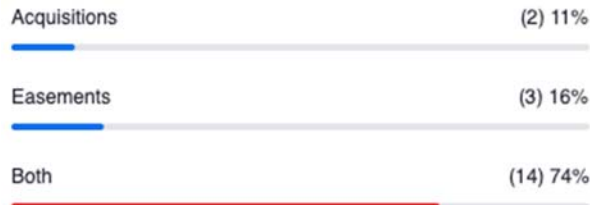
Workshop participants included staff from the following State agencies:

- Air Resource Board
- CalFire
- California Department of Food and Agriculture
- California Natural Resources Agency
- California Department of Conservation
- California Department of Water Resources
- California Department of Parks and Recreation
- State Coastal Conservancy
- Sacramento-San Joaquin Delta Conservancy
- California Department of Fish and Wildlife

Participants responded to a poll asking additional questions about the perspectives they represent:

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**1. Do you work with:**



**2. How familiar are you with projects that involve acquisitions and easements?**



*Amanda Martin, Deputy Assistant Secretary for Administration and Finance*

Mrs. Martin provided background on the need behind and the process of developing a Statewide system for tracking long-term project performance within CNRA. In addition to being able to demonstrate the lasting impact of the State's natural resources work, a Statewide system will create consistency in monitoring that will enable sharing of resources across departments.

The MSU [white paper](#) and the kickoff event in April both explained the need for a statewide monitoring system and began the process of defining the RAPTR system. The workshops, beginning with this acquisitions and easements workshop, focus in on the specific metrics that may be collected in the RAPTR system. Mrs. Martin noted that developing the RAPTR system requires both an ambitious vision as well a focus on the small steps that will put the State on a path to being able to understand and showcase all that its natural resources work accomplishes.

*Gina Ford, Senior Environmental Scientist, MSU*

Ms. Ford provided an overview of the Resources Agency Project Tracking and Reporting (RAPTR) system, including background about the CNRA Monitoring and Stewardship Unit (MSU) and an overview of the strategy for developing the system. The MSU was tasked with developing a system to better tell the story of the impacts of the bond-funded grant projects under CNRA. MSU first evaluated how these projects are currently monitored and then developed a set of recommendations for tracking and reporting in the future. These



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recommendations are presented in the white paper mentioned above.

Development of the RAPTR database is being carried out in two parallel processes. One track, including this workshop, focuses on engaging those who will use the database to identify the metrics it will track, while the other track focuses on the technical aspects of building the system. The software development is currently in progress and will likely be released for testing incrementally as different components are built.

Ms. Ford reviewed the overall decision process for determining the metrics and methods that will be tracked within RAPTR, noting that the current workshop is focused on initial identification of indicators that may be used to address the management questions identified during the kickoff meeting and beginning to prioritize metrics for each indicator.

### **Acquisitions and Easements Overview**

*Brad Juarros, Environmental Scientist, MSU*

Mr. Juarros provided background to inform the discussion on indicators and metrics for acquisitions and easements projects. He shared requirements for post-completion monitoring of bond-funded projects per the State's Bond Accountability Guide:

*The Bond Accountability Guide advises State agencies to track long-term investments by requiring annual monitoring reports from grantees and by conducting annual site visits (when feasible) to ensure that bond-funded projects are maintained and compliant with the intended purpose of the funding source, the program, and as stated in the project's grant agreement. Minimum baseline documentation that should be included in post-completion monitoring efforts:*

- *Annual monitoring Reports*
- *Annual project photos*
- *Updates on status of corrective actions planned or taken*
- *if project was not in compliance with the agreement purpose.*

Mr. Juarros shared key findings related to current monitoring of acquisitions and easements projects, per MSU's project evaluation. The evaluation considered 53 acquisitions projects, of which 68% had a monitoring requirement as part of the grant agreement. Among those that had a monitoring requirement, MSU was unable to find monitoring reports for 56% and found only incomplete information for another 8%.

The April kickoff meeting focused on brainstorming management questions that should be addressed through the RAPTR system. Mr. Juarros presented the acquisitions and easements-



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related management questions that were identified, highlighting three categories into which the questions fell: management, benefits, and access. He noted that some of the management questions were relevant to multiple categories and there may be metrics that address more than one of the key management questions.

The three management questions that kickoff participants identified as most important to monitor in RAPTR were:

- **Management:** Is the acquisition being managed in accordance with the land uses permitted? (i.e. ag, habitat, residential, and whether nonpermitted uses are occurring)
- **Benefits:** Are there climate benefits - GHG emissions reductions or increased carbon sequestration?
- **Access:** If acquired for public access, is it still accessible to public?

There are a number of existing tools that track information related to acquisitions and easements in California: the CNRA Conservation Easements Database, the California Protected Areas Database (CPAD) and the California Conservation Easement Database (CCED). The CNRA database is a search-based platform that focuses on project title, but has limited capability in terms of location data, ability to upload related documents, and other important features. CPAD and CCED, which cover both public and private easements, are GIS-based and therefore have better location functionality. However, they do not comprehensively cover all projects in the state, and associated documents cannot be uploaded to these databases.

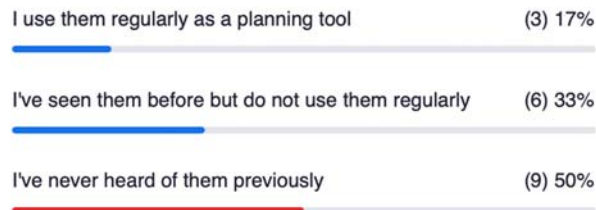
Key acquisition documents and information that the centralized RAPTR system is anticipated to collect includes property deeds, deed of conservation easement, legal descriptions, appraisals, grant agreements, management plans, maps, and others. RAPTR will serve as a management tool, helping agencies access and sort through information for strategic planning, documenting public benefits, tracking changes over time, and helping agencies with overlapping missions leverage resources. Additionally, it will simplify audits by providing a central location for files and information.

RAPTR will provide information on long-term outcomes and a means to assess whether stakeholder and bond program goals and objectives are being met.

Participants responded to a poll about their familiarity with the CPAD and CCED databases.

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**1. How familiar are you with the CPAD and CCED databases?**



*Jim Falter, Environmental Scientist, MSU*

Mr. Falter shared a mock-up illustrating some of the functionality that RAPTR may offer to make data more accessible and usable. (Mr. Falter emphasized that the mock-up is meant to demonstrate functionality and is not a real prototype of what the system will look like.) Some key features likely to be included in RAPTR are an interactive map allowing properties to be selected by location, a dashboard displaying key project information such as property name and grant number, high resolution images of the land covered by the acquisition, a description of the acquisition, the current manager of the property, and the funding sources that supported the project. Other information of interest that could potentially be monitored in the RAPTR system include metrics such as landcover distribution, native species likely present on the property, seasonal climatology, hydrographic information, fire threat levels, and flood risk.

Mr. Falter noted that while the primary mission of RAPTR is to support analysis of the short- and long-term performance of natural resource initiatives across the State by aggregating and structuring project data, that same structure would allow the system to potentially automate linkages between the information contained in RAPTR and environmental and social data from external databases maintained by the State, federal agencies, NGOs and research organizations. These linkages would make it that much easier for Program Staff to have the relevant contextual data necessary for assessing the value of a proposed project or the performance of an ongoing project. Mr. Falter invited participants to share which outside data sources they would find useful in planning and managing acquisitions.

### **Panel Presentations: Current Efforts in Project Performance Monitoring and Evaluation**

Two panelists, both leaders of environmental nonprofits and nationally accredited land trusts, gave presentations on existing processes and methodologies used to track information about their organizations' acquisitions and easements.

*Shelton Douthit, Executive Director, Feather River Land Trust*

Mr. Douthit shared background on the Feather River Land Trust (FRLT), including the area on which the land trust operates and its mission to conserve the lands and waters of the Feather River region and steward their ecological, cultural, and educational values for current and



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future generations. As a member of the California Council of Land Trusts, FRLT abides by its principles of cooperation, collaboration, and communication among land trusts in the State, as well as by the standards and practices of the national Land Trust Alliance.

Land trusts monitor easements to ensure conformance to the conservation values spelled out in the easements. Monitoring is shaped by the best practices established by the Land Trust Alliance as well as the monitoring requirements set by the U.S. Internal Revenue Service. In addition, monitoring ensures that the land trust honors its commitments, including to the partners who help fund easements – including the taxpayers whose public funds support the purchases.

FRLT bases its monitoring on the easement materials: the conservation easement itself, the baseline documentation report, and any land or resource management plans. Monitoring begins with review of the documents mentioned above plus past monitoring reports, then FLRT conducts due diligence verifying the status of the property and any activity on it since the last monitoring, and then the monitoring itself begins. Monitoring includes desktop reconnaissance, for example reviewing satellite imagery to identify areas of potential concern and develop a field work plan, and then site inspections. After the site inspections, a monitoring report is made, with a formal acknowledgement, submittal, and recordkeeping. In the case of any violations, FRLT works to remediate without litigation if possible. FRLT rarely amends easements.

*Connie Best, Co-Founder and Co-CEO, Pacific Forest Trust*

Participants responded to a poll that asked whether they have experience with conservation easements on working lands.



Ms. Best shared background on PFT, which pioneered the use of working forest conservation easements. PFT focuses on the public benefits of privately-owned working forests, working in partnership with private landowners, communities and government agencies to sustain forests for their many public benefits of wood, water, wildlife, and people’s well-being. Ms. Best said that a well-crafted easement can bring together many benefits and values.

While there are some restrictions that are typical across many of PFT’s easements, such as limiting or prohibiting building development and identifying habitats to be managed for species



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needs, each easement is site-specific. Because each easement is different, monitoring likewise varies. Monitoring focuses on compliance with easement restrictions, and generally includes site visits at least annually – more often when forest management is planned – as well as annual visits with landowners. PFT monitoring is data-driven and geo-referenced and includes not only timber harvest but also the changing composition of a forest over time progressing toward forest goals.

Ms. Best emphasized that easements are an ongoing public-private partnership and monitoring is cooperative. Frequent communication is critical and taking a planning-focused approach allows miscommunications to be identified early, before any action on the ground. PFT easements also include strong language related to remedies and having State participation creates a backstop for enforcement.

Ms. Best identified some key data that RAPTR could track to support acquisition and easement projects: location, acres protected, ownership, changes in grantor or grantee, resources conserved, public access, monitoring information and compliance, and documents such as the easement, baseline, monitoring plans, and amendments. Ms. Best said that although consistent monitoring requires a lot of work, the benefits are immense: by better tracking acquisitions and their accomplishments, the State will be able to share compelling success stories that demonstrate the value and return on investment of the funding the people of California provide. Ms. Best emphasized that the grantees are key partners in supporting robust monitoring.

### **Guiding Principles and Screening Criteria**

*Elea Becker Lowe, Environmental Scientist, MSU*

Ms. Becker Lowe reviewed the process through which MSU staff and workshop participants will identify indicators and metrics for inclusion in RAPTR. During the kickoff, participants helped identify important management questions that data in RAPTR should help staff answer, as discussed during the earlier presentation by Mr. Juarros. Key management questions address goals and objectives defined at the bond, agency, and/or project level. The stakeholder workshops will focus on the indicators and metrics that can be used to answer the management questions. Indicators help focus the management questions into categories of information that could be collected, and metrics are specific measurements that can be taken of attributes within those categories.

While there are many potential indicators and metrics to address the management questions, the RAPTR system will focus in on a small set of key metrics that can be collected consistently



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across projects and over time. To determine which metrics will be included, potential metrics will be evaluated based on a set of screening criteria. The first pass, which is the focus of the workshop breakout sessions, focuses on the “SMART” criteria: specific, measurable, achievable, representative, and time-bound/time-specific. An important additional criterion is whether the metric is “RAPTR ready” – that is, which metrics that meet the SMART criteria can be most easily added to the system. This criterion considers whether the metric is already captured in an existing repository, there are established processes in place for collecting this metric, or it could be easily added to an existing data collection process.

In addition to the first screening process based on the SMART-R criteria, potential metrics will later be evaluated based on cost-effectiveness, machine readability, labor capacity, access to applicable technology, and availability of technical expertise.

### **Breakout Discussions: Leveraging and Evaluating Indicators and Metrics**

Attendees shared potential indicators and metrics and then evaluated these based on the SMART-R criteria in a series of breakout discussions. The discussions focused on potential indicators and metrics related to three of the key management questions identified during the kickoff, as Mr. Juarros reviewed during his presentation:

- **Benefits/Climate Benefits:** Are there climate benefits - GHG emissions reductions or increased carbon sequestration?
- **Land Management/Compliance:** Is the acquisition being managed in accordance with the land uses permitted? (i.e. ag, habitat, residential, and whether nonpermitted uses are occurring)
- **Access:** If acquired for public access, is it still accessible to public?

There were three breakout sessions, such that every group of participants had a chance to discuss each of the three management questions. One or two MSU staff facilitated and tracked the discussion for each management question. For each management question, participants addressed the following:

1. What are potential indicators/metrics that can be used to help address the questions?
2. Where can this information be found? (For example, documents, tools, etc.)
3. What can we learn from an initial SMART analysis about the appropriateness of incorporating these indicators/metrics into the RAPTR system?
4. Which indicators/metrics show the most promise in responding to the management questions and being included in the RAPTR system?

Breakout templates were used by the three groups, to help track their suggested indicators, metrics, and SMART analysis results. See Appendix for the tables as completed based upon breakout participant input.





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### Report Out and Plenary Discussion

MSU staff shared indicators and metrics discussed in the breakout sessions they facilitated.

#### *Climate Benefits*

Key climate benefit indicators discussed include reduction in greenhouse gas emissions and/or increase in greenhouse gas sequestration, fire risk, flood risk, and water quality. Many of the core metrics related to emissions have well-established monitoring methods, though whether these can be readily carried out at the project level still needs to be determined. Participants also highlighted that changes in human behavior are also important to consider and additional follow-up is needed to establish robust metrics.

Work is currently being done by other State agencies to quantify fire risk, but this indicator does not yet have timely, RAPTR-ready metrics. There are various flood risk models already in use that could be used as metrics within RAPTR. While these generally meet the SMART criteria, in order to be considered RAPTR-ready, additional work needs to be done to determine which model best suits the acquisitions and easements-related management questions.

Water quality-related metrics include amount of preserved riparian lands and egress of population centers out of high flood- and fire-risk areas.

Mr. Falter noted that in many cases climate benefit monitoring may need to focus on tracking implementation of best management practices rather than their impacts on the variables of interest. For example, much of the monitoring related to carbon sequestration focuses on whether sequestration activities were conducted, rather than measuring the content of the soil itself.

Key indicators and metrics identified in the breakout discussion are summarized in the table below. For complete analysis notes, please review the Breakout Template for Question 1 in the Appendix.

**MANAGEMENT QUESTION 1 (MULTI-BENEFITS): ARE THERE CLIMATE-RELATED BENEFITS ASSOCIATED WITH THE ACQUISITION/EASEMENT?**

**Indicator 1 – Reduction in GHG emissions and/or increased GHG sequestration**



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<b>Metric</b>	<b>Recommendations</b> YES (Go with it) MAYBE (More research) NO (Not for RAPTR)
Land Cover Type	Yes
Biomass Density → partly derived from Land Cover data	Maybe
VMT → derived from Land Cover data	Yes
Active reduction in GHG emissions through BMPs(?)	Maybe
<b>Indicator 2: Reduction in Fire Risk</b>	
<b>Metric</b>	<b>Recommendations</b>
Fire 'Threat' Level → Land Cover could provide data as input (p, biomass)	Maybe
Value of property at risk (\$)	Maybe
<b>Indicator 3: Reduction in Flood Risk</b>	
<b>Metric</b>	<b>Recommendations</b>
Flood risk – max natural flood stage level PDF, probabilities of structural failures (p, \$)	Yes
Observed Property Damage (\$)	Yes
Maximum stage elevation (m)	Yes
Volume diverted water (m3)	Maybe
Population affected by given flood event (persons)	Yes
Acres of developed land removed from flood plain (acres) -> see land cover	Yes
Conversion of land to designated flood plain (acres)	Yes
<b>Indicator 4: Improve Water Quality</b>	
<b>Metric</b>	<b>Recommendations</b>
Acres of preserved riparian/aquatic habitat (acres)	Maybe
<b>Indicator 5: Egress of population centers in high-risk areas</b>	
<b>Metric</b>	<b>Recommendations</b>
Population density	Yes

*Land Management/Compliance*

Key indicators and metrics related to land management and compliance discussed during the breakouts include:

- Change to the size of a development envelope, as compared with the conservation easement and legal description
- Size, number, and type of structure within the development envelope
- Presence of trespassing, as reported by landowners as well as based on photographic evidence and through ground-truthing
- Type and coverage of cover crops

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- Transfer of rights, including right of way, for example for power lines, and water rights
- Surveys related to hunting, angling, and boating
- Co-benefits of irrigated cropland, such as riparian corridors
- Recreational uses, both commercial and otherwise
- Mining, which can be determined through aerial monitoring as well as databases of active mines
- Bush removal for fuel reduction and protection of water basins

Mr. Juarros noted that many of the compliance indicators and metrics were specific to particular land use categories. However, a number of those indicators were relevant across the board, including multi-benefits of coverage, types of cover crops, application of compost to soils to support diversion from landfills as well as increased soil carbon content, and obvious misuse of easements such as development beyond the limits set out in the easement.

Key indicators and metrics identified in the breakout discussion are summarized in the table below. For complete analysis notes, please review the Breakout Template for Question 2 in the Appendix.

<b>MANAGEMENT QUESTION 2 (LAND MANAGEMENT - PERMITTED): WHAT ARE THE PERMITTED (LEGALLY ALLOWABLE) USES OF THE LAND?</b>	
<b>Indicator 1 – observed land uses (residential)</b>	
<b>Metric</b>	<b>Recommendations YES (Go with it) MAYBE (More research) NO (Not for RAPTR)</b>
Development (not green)	Yes
Changes Size of development envelope	
Size, # or type of structure in the envelope	
Presence of trespass, marijuana	
<b>Indicator 2: observed land uses (agricultural)</b>	
<b>Metric</b>	<b>Recommendations</b>
Cattle grazing	Yes
Irrigated crop land	
Protection of co-benefits	
Crop cover type	
Cover crop type	
Crop coverage	
Soil health	



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Indicator 3: observed land uses (commercial)	
Metric	Recommendations
Commercial recreation	
Tree Harvest	Yes
Power lines selling row for kv line through the property 100-150' wide	
Seismic stations	
Wind farms (turbine)	
Compost Application	
Increased rotation period	
Fuel reduction	
Pest infestation	
Indicator 4: observed land uses (Industrial)	
Metric	Recommendations
Mining activities	
Indicator 5: observed land uses (Recreational)	
Metric	Recommendations
Linear feet of trail	Yes
Erosion	
Hunting / Angling	Yes
Hiking/boating	
Trail use	Yes
Visitor information	
People Fishing	
Indicator 6: Restoration area	
Metric	Recommendations
Fisheries	
Water quality	
Brush removal (acreage)	
Indicator 7: observed land uses (water)	
Metric	Recommendations
Transfer of water rights	

*Access*

Ms. Becker Lowe said that there is a need for both greater understanding of how programs currently monitor access and follow up discussion on the potential metrics. She noted that the next workshop will focus on access and recreation. Six indicator categories were identified for the access-related management question, with some potential metrics for each:

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- Barriers to access: locked gates, legal restrictions, safety hazards
- Information sharing and public awareness: signage depicting hours, information available online, communication of any safety issues
- Infrastructure for public access: presence of gates and roads
- Violations: trespassing, presence of garbage or debris
- Usage of the easement for recreation: number of visitors
- Impacts of public access on adjacent landowners: illegal recreation on lands that do not allow public access

Participants discussed how programs manage and track projects over their tenure, including duration and frequency of monitoring and who should be responsible for conducting site visits. Participants additionally discussed the impact of the COVID-19 pandemic for tracking access issues and conducting necessary enforcement.

Ms. Ford noted that another important access issue is the ability of emergency personnel to access an area during emergencies such as fires or floods.

Key indicators and metrics identified in the breakout discussion are summarized in the table below. For complete analysis notes, please review the Breakout Template for Question 3 in the Appendix.

<b>MANAGEMENT QUESTION 3 (USERS): IF ACQUIRED FOR PUBLIC ACCESS, DOES THE PUBLIC STILL HAVE ACCESS?</b>	
FOCUS: Due to the upcoming Access & Recreation workshop in September, this question should FOCUS on the legal aspects. Does the deed or other legal documentation allow for legal public access and has that been provided.	
Indicator 1 – Barriers	
<b>Metric</b>	<b>Recommendations YES (Go with it) MAYBE (More research) NO (Not for RAPTR)</b>
Locked Gates to property	Yes
Safety Hazard (natural or man-made) that prevents access	Maybe
Legal Restriction that impede public access	Maybe
Indicator 2: Signage & Awareness of Public	
<b>Metric</b>	<b>Recommendations</b>
Posted signs for hours and access	
Information online	
Posted safety signs	



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Usage by Public for transport	
Indicator 3: Presence of Infrastructure for public access	
<b>Metric</b>	<b>Recommendations</b>
Presence of gating	
Presence of signage	
Presence of roads	
Indicator 4: Violations of restricted access	
<b>Metric</b>	<b>Recommendations</b>
Presence of garbage	
Reports of trespassing	
Indicator 5: Usage of Easement for Recreation	
<b>Metric</b>	<b>Recommendations</b>
Number of visitors to property	Maybe; depends on exact method
Indicator 6: Impacts of Public Access on Adjacent Landowners	
<b>Metric</b>	<b>Recommendations</b>
Presence of unauthorized trails in adjacent land	
Reports of trespassing in adjacent land	

*Discussion*

Ms. Kalman asked which of the metrics that were discussed in the small group discussions were identified as relevant as well as RAPTR-ready. Ms. Ford said that some of the climate benefits metrics are straightforward and are already being collected. Additional review, however, is needed to determine whether such information is collected at the scale of each project. She said that a key consideration for those metrics that have straightforward measures is the level of certainty and rigor with which it will answer the management questions.

A participant noted that some parks close during high-fire danger “red flag warnings”, which is related to both access issues and reduction of fire risk.

Mr. Juarros said that presence, size, and type of structure is easily tracked and was brought up as an important metric many times during the discussion.

Ms. Kalman asked whether any of the metrics discussed, which may not be feasible to track at this time, might be important to consider in the future. Mr. Falter identified project-level models that use land use change and implementation of management practices into greenhouse gas effects as potential future opportunities. A participant expressed agreement with the importance of these measures, saying that it is a readily quantifiable co-benefit that will continue to be very important to the State. Mr. Juarros said that best management



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practices related to co-benefits are very important, despite not being the acquisition's primary purpose.

A participant expressed concern about staffing capacity to carry out additional monitoring that would be necessitated by the RAPTR system, especially given that some departments and projects are already at the limit of their capacity with existing monitoring processes. The participant noted that they had shared the tools they currently use for monitoring and encouraged MSU to review those and use them as a starting point for RAPTR.

MSU Response:

MSU staff acknowledged the need to balance making RAPTR a valuable tool without significantly impacting capacity. The goal is for RAPTR to track only a few metrics for each of the management questions, such that workload increases are minor yet information is more readily accessible to understand the benefits accrued by the State's investments. They emphasized the focus on including metrics in RAPTR that are already being collected, as well as the plan that once RAPTR is developed it will be implemented only moving forward and not retroactively. MSU staff affirmed that they would review the information shared by participants and build on existing monitoring efforts.

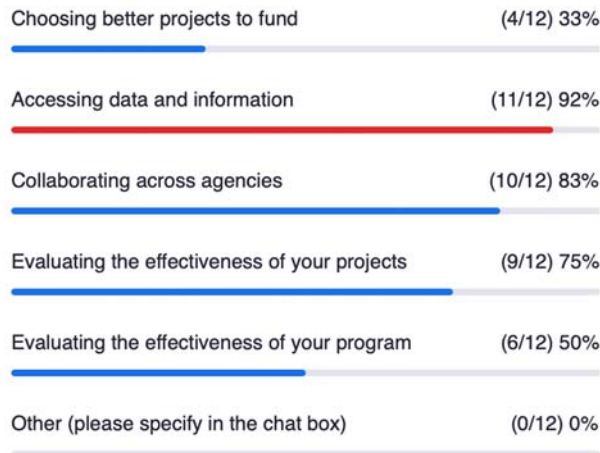
A participant noted that in the context of implementation of Senate Bill 1386, which requires that all State agencies consider carbon sequestration when revising or adopting policies, procedures, and expenditures, programs may already be identifying and using metrics related to carbon sequestration.

Participants responded to a poll about the relevance of RAPTR to their work.



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**1. How do you think RAPTR could help you with your job? (Check all that apply) (Multiple Choice)**



### Wrap Up and Next Steps

Ms. Ford thanked participants for joining the workshop and providing their input. She reviewed the timeline for the remaining workshops in this series from now through summer 2021, to be followed by a culmination event. The next workshop theme is Access and Recreation, followed by Aquatic Habitat, Terrestrial Habitat, and then Capital Infrastructure and Green Infrastructure.

There may be opportunities to participate in working groups following the workshop to dig deeper into indicators and metrics that need additional consideration. MSU created an online message board to encourage stakeholder engagement on the different workshop themes. The Acquisitions and Easements workshop message board is currently available and additional message boards will be made available for each theme as the respective workshops approach. Participants were invited to engage via any of these channels, in addition to directly reaching out to MSU staff via email or phone.

The RAPTR system is anticipated to begin to be built in September 2020 and will likely take 12-14 months to develop. The tool will likely be released in phases, as modules that relate to grant lifecycles are completed and ready to be tested.

Participants were then asked to share feedback about the meeting; responses are summarized below.




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**1. Did the breakouts serve as a good opportunity to provide input on RAPTR development?**

Yes (8) 100%




No (please explain in the chat) (0) 0%



**2. How did the remote meeting format work for you?**

Too many breaks (0) 0%



Sufficient breaks (7) 88%



Not enough breaks (1) 13%



**3. Which of the agenda topics were relevant to your work? (Check all that apply) (Multiple Choice)**

RAPTR presentation (7/8) 88%



Panelist presentations (5/8) 63%



Breakout sessions (8/8) 100%





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Appendix: Breakout Templates

MANAGEMENT QUESTION 1 (MULTI-BENEFITS): ARE THERE CLIMATE-RELATED BENEFITS ASSOCIATED WITH THE ACQUISITION/EASEMENT?									
Indicator 1 – Reduction in GHG emissions and/or increased GHG sequestration									
Metric	Information Sources/Not Yet Collected	Specific	Measurable	Achievable	Representative	Time-bound	RAPTR Ready	Notes	Recommendations YES (Go with it) MAYBE (More research) NO (Not for RAPTR)
Land Cover Type	Multi-/Hyperspectral images, Surveys, reports, etc...	Y	Y	Y	Y	Y	Y	Multiple sources of land cover data. Look at change in distribution for indicator. Might not be relevant under all circumstances.	Yes
Biomass Density → partly derived from Land Cover data	LiDAR	Y	Y	Y	Y	N	N	Time – LiDAR surveys are not occurring on a set schedule, and do not cover the full state each time. Depends on cost and contract. Resulting data would only be RAPTR Ready only if it has been converted to a standard metric of areal biomass density. Consider BMPs for biomass including separate measurements/models of Soil Organic Carbon (SOC) [not practical – see below].	Maybe
VMT → derived from Land Cover data	CARB methodologies quantifying impacts to GHG emissions based on land-use change	Y	Y	Y	Y	Y	Y	Elimination of rights for future developments on land reduces VMT to nearby population center. Need to consider 'leakage factors' → GHGs aren't eliminated through land use change but simply move. Similar system used by SALC program.	Yes
Active reduction in	CARB-CCI Methods,	N	Y	Y	Y	U	N	Good subject for working group discussion.	Maybe



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GHG emissions through BMPs(?)								Examples: participation in carbon sequestration markets (CCI methods derived from carbon market methodologies or similar), increasing soil carbon content on agricultural lands → check up whether facilities actively following prescribed BMPs [from USGS, USDA?, others?]; some measurements of SOC but difficult and heterogenous so rely more on indirect modeling. Resource Conservation Districts starting to ramp up sequestration techniques and monitor practice and derive change in SOC indirectly. Check compliance against promised climate-related BMPs. Application of compost to increase SOC can be beneficial beyond just agricultural lands. **Also, see SB1386 which require all state agencies, departments, boards, and commissions to consider a reduction in GHGs when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.	
<b>Indicator 2: Reduction in Fire Risk</b>									
<b>Metric</b>	<b>Information</b>	<b>S</b>	<b>M</b>	<b>A</b>	<b>R</b>	<b>T</b>	<b>R</b> <b>R</b>	<b>Notes</b>	<b>Recommendations</b>
Fire 'Threat' Level → Land Cover could provide data as input (p,	Source CAL FIRE - FRAP	Y	Y	Y	Y	U	U	Multiple methods for assessing risk of the impacts of wildfire on GHG emissions/sequestration. CARB CCI provides some methods to quantify impact of risk reduction on a project level. Does the fire risk	Maybe



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biomass)								model have enough granularity to resolve changes on project level? Tadashi Moody at FRAP could be good source of information + Alan Talhelm [CARB], Phil Briggs, Kevin Welch [CAL FIRE] for project-level assessments of fire risk → a user-friendly model may be forth-coming. Change of sign in fire risk fairly straight forward, but quantifying absolute change in risk is more difficult. Worthwhile to separate risk of ignition from expected burn area and intensity?	
Value of property at risk (\$)	Appraisal information, localized fire risk modeling(?)	Y	Y	Y	Y	U	U	Higher resolution modeling for methods of property hardening, fire breaks, etc. State Fire Marshall's office, Steve Hawks (CAL FIRE) → fire behavior in developed environments.	Maybe

Indicator 3: Reduction in Flood Risk

Metric	Information	S	M	A	R	T	R	R	Notes	Recommendations
Flood risk – max natural flood stage level PDF, probabilities of structural failures (p, \$)	FEMA, USACOE, USBR, DWR, USGS, S/RWQCBs	Y	Y	Y	Y	Y	U		Which flood level? DWR could provide experts to weigh in on defining good metrics. Importance of a given management question in same region will vary with mission of the office even if both result as co-benefits from similar operations (e.g., wetlands restoration, levee setbacks). CVFPP states there is a Flood Risk Operations and Assessments (FROA). Most restorations list flood risk as a co-benefit. Some risk modeling done at a project or at least 'local' level. Look into county-wide or city-wide	Yes



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								plans for more local risk assessments. Flood Corridor Program funds project to specifically reduce flood risk.	
Observed Property Damage (\$)	Insurance filings, city/county assessments	Y	Y	Y	Y	Y	Y		Yes
Maximum stage elevation (m)	Stream and basin gauges	Y	Y	Y	Y	Y	Y		Yes
Volume diverted water (m3)	Basin level-volume relationships, hydrologic modeling(?)	Y	Y	Y	Y	U	U		Maybe
Population affected by given flood event (persons)	Insurance filings, city/county assessments	Y	Y	Y	Y	Y	Y		Yes
Acres of developed land removed from flood plain (acres) -> see land cover	Self-monitoring (surveying) of land cover distribution, remotely sensed images	Y	Y	Y	Y	Y	Y		Yes
Conversion of land to designated flood plain (acres)	Self-monitoring (surveying) of land cover distribution, remotely sensed images	Y	Y	Y	Y	Y	Y		Yes
Indicator 4: Improve Water Quality									
<b>Metric</b>	<b>Information</b>	<b>S</b>	<b>M</b>	<b>A</b>	<b>R</b>	<b>T</b>	<b>R</b>	<b>Notes</b>	<b>Recommendations</b>



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								R		
Acres of preserved riparian/aquatic habitat (acres)	Self-monitoring (surveying) of land cover distribution, remotely sensed images	Y	Y	Y	Y	Y	Y	Y	Suggested by DOC; particularly for properties in or near working ranch lands.	Maybe
Indicator 5: Egress of population centers in high-risk areas										
<b>Metric</b>	<b>Information</b>	<b>S</b>	<b>M</b>	<b>A</b>	<b>R</b>	<b>T</b>	<b>R</b>	<b>R</b>	<b>Notes</b>	<b>Recommendations</b>
Population density									CalTrans trying to model this for state highways and now working with counties on county roads.	Yes

MANAGEMENT QUESTION 2 (LAND MANAGEMENT - PERMITTED): WHAT ARE THE PERMITTED (LEGALLY ALLOWABLE) USES OF THE LAND?										
EXAMPLE: Indicator 1 – observed land uses (residential)										
<b>Metric</b>	<b>Information Sources/Not Yet Collected</b>	<b>Specific</b>	<b>Measurable</b>	<b>Achievable</b>	<b>Representative</b>	<b>Time-bound</b>	<b>RAPTR Ready</b>	<b>Notes</b>	<b>Recommendations</b> YES (Go with it) MAYBE (Do more research) NO (Not for RAPTR)	
Development (not green)	Satellite images, and building permits	X	X	X	X	X	X		Yes	
Changes Size of development envelope	CE, legal description	X	X	X	X	X	X	This would require a bit more digging but doable.		



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Size, # or type of structure in the envelope	CE	X	X	X	X	X	X		
Presence of trespass, marijuana	Landowner, photographic (self reported)	X	X	X	X	X	X		
Indicator 2: observed land uses (agricultural)									
Metric	Information	S	M	A	R	T	RR	Notes	Recommendations
Cattle grazing	Satellite, surveys, monitoring reports, etc...	X	X	X	X	X	X		Yes
Irrigated crop land	Monitoring reports from grantees (easement holders), aerial imagery and field observations	X	X	X	X	X	X	Row crops, pasture, orchards. Protection of co-benefits like open space use and natural resource values. Opportunity to restore habitat and riparian corridors.	
Protection of co-benefits	Monitoring reports from grantees (easement holders), aerial imagery and field observations							Focus on compliance monitoring. Co-benefits listed in conservation section	
Crop cover type	CE, farm plan (BMP's related to runoff, pesticides, fertilizer)	X	X	X	X	X	X	Water testing. Bird counts that utilize cover crop (corn, other grain). Again doable, but requires more effort to collect data.	
Cover crop type	Easement holder, aerial imagery							Determine water use, support wildlife	
Crop coverage	CE's dictate where	X	X	X	X	X	X		



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	crops/operations can be- Setbacks from riparian zone								
Soil health	Soil testing	X	X	X	X	X	X	Increased in soil carbon	
Indicator 3: observed land uses (commercial)									
Metric	Information	S	M	A	R	T	RR	Notes	Recommendations
Commercial recreation	Easement holders through monitoring reports							Commercial recreation (horseback riding, wedding events), mining	
Tree Harvest	Timber Harvest Plans (CDFW)	X	X	X	X	X	X		Yes
	Remote sensing	X	X	X	X	X	X	Not great for single tree selection but larger harvest areas ok	
Power lines selling row for kv line through the property 100-150' wide	Land trust discovered what was happening and communicated to CalFIRE	X	X	X	X	X	X		
Seismic stations	CE was silent	X	X	X	X	X	X		
Wind farms (turbine)	Verified from air, County planning permitting,	X	X	X	X	X	X		
Compost Application								Shelby Livingston	
Increased rotation period	FMA, FMP	X	X	X	X	X	X	Harvest older larger diameter trees, increases fire resilience	
Fuel reduction	Ground truthing, plus aerial	X	X	X	X	X	X		
Pest infestation								Implementation of bmp's for climate benefits	





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Indicator 4: observed land uses (Industrial)										
Metric	Information	S	M	A	R	T	RR	Notes	Recommendations	
Mining activities	Easement holders through monitoring reports, aerial imagery, public databases that show wells and active mines	X	?	X	PO SSI BLY	X	?	Surface mining (gravel, rock)		
Indicator 5: observed land uses (Recreational)										
Metric	Information	S	M	A	R	T	RR	Notes	Recommendations	
Linear feet of trail	Post completion report (3-years only)	X	X	X	X	X	X	Workplan specifications, subsequent completion reports verify later on.	Yes	
Erosion										
Hunting / Angling	Surveys	X	X	X	X	X	X	CDFW database, geo-specific information about whether an animal was taken on that property, game tags how the information is collected.	Yes	
Hiking/boating	Surveys	X	?	?	X	X	X	Marina access points that can be surveyed. Example given was a scientific aid who collecting the data himself with a colleague.		
Trail use									Yes	
Visitor information	Recorded, head counts, surveys	X	X		X			Not clear how achievable		
People Fishing										
Indicator 6: Restoration area										
Metric	Information	S	M	A	R	T	RR	Notes	Recommendations	



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Fisheries	Post completion report								Limited to 3-years.	
Water quality	Post completion report									
Brush removal (acreage)	Post completion report								For protection of water basins area protected from fire through fire protection for water source areas. Removing brush from a corridor protecting water resources	
Indicator 7: observed land uses (water)										
Metric	Information	S	M	A	R	T	RR	Notes	Recommendations	
Transfer of water rights	Recorded instrument	X	X	X	X	X	X			

**MANAGEMENT QUESTION 3 (USERS): IF ACQUIRED FOR PUBLIC ACCESS, DOES THE PUBLIC STILL HAVE ACCESS?**

FOCUS: Due to the upcoming Access & Recreation workshop in September, this question should FOCUS on the legal aspects. Does the deed or other legal documentation allow for legal public access and has that been provided.

EXAMPLE: Indicator 1 – Barriers

Metric	Information Sources/Not Yet Collected	Specific	Measurable	Achievable	Representative	Time-bound	RAPTR Ready	Notes	Recommendations YES (Go with it) MAYBE (Do more research) NO (Not for RAPTR)
Locked Gates to property	Reports from public, visual observations, etc..	x	X	X	X	X	X	Status of “locked gates” depends on what type of easement is in place	Yes





