



Appendix 3. d EECCOA Challenge

Impacts of the Matilija Dam Outreach Tier

Project Builder Workbook

January 2024

About the EECCOA Challenge: This challenge provides students with the opportunity to research, design and implement project proposals that can mitigate climate change and ocean acidification in the school campus and beyond. This document was created with the intention to help students' teams develop and potentially implement projects focused on educating and raising awareness in their community about the Matilija Dam and the needs to remove it. We hope you are up for the challenge!

The MERITO Foundation, sponsors and partners will award cash or in kind prizes to the students authors of the best 3 projects for each tier (energy efficiency, water conservation, waste reduction, or outreach regarding the Matilija Dam removal) in the spring of 2024, and will match funds to participating schools for part of the implementation costs of the most cost-effective project proposals.

This project builder workbook is for **OUTREACH CAMPAIGN REGARDING THE IMPACTS OF THE MATILIJDA DAM ON THE VENTURA RIVER:** This workbook will help you design and propose an education or outreach campaign that informs a specific audience about the importance to remove the Matilija Dam from the Ventura River Watershed.

The deadline to deliver your project proposal to your teacher is _____
Selected teams will present during the EECCOA Challenge Award Ceremony on Monday, May 20, 2024

Below are the challenge guidelines to help you develop your project proposals in **6 STEPS** and worksheets to help you outline your project idea and methods. The key to a successful project is to understand the issue addressed by following 6 steps that will help you define the 'Who', 'What', 'How' and 'When'. In this tier, the issue is the Matilija Dam removal. You will find links to information about the Matilija Dam in the last page of this document.

STEP 1. Create a TEAM (5 Points): Your team must consist of a minimum of 3 students and maximum of 5. Include the name of your team, the name of your project, names of team members, your school, grade, and teacher's name. Fill in the box below to draft your project proposal.

Team name:	
Project proposal name:	
Tier (Project Goal)	<i>Design of a public education or awareness campaign (AKA Outreach) about the impacts of the Matilija Dam on the Ventura River Ecosystems.</i>
Team members names:	
School name:	
Grade:	



Teacher's name	
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STEP 2. Conduct a COMMUNITY'S ASSESSMENT of your selected audience (20 possible points) to how much they know about the Matilija Dam.

There are many methods to conduct a community's assessment, but the easiest is through surveys. Basically, you write down clear and specific questions, and ask your audience (the community of people you choose to educate) questions to gauge how much they know about the subject. To make good questions you need to be informed. You need to read about the subject as much as you can. In this case, this year, the local environmental issue of concern is the impacts of the relic Matilija Dam on the animals, plants, insects and people living on and around the Ventura River. We included links to pages with information on the last page of this document. Then you write your 5-8 questions and ask your chosen community. Please don't be surprised if many do not even know if it exists. Then how much they care if it is removed or not. **Your audience** can be your school campus, your neighborhood, your city, an organized community group, or why not, an audience abroad!

If you choose your school campus you probably don't want to include the students in your class who are also learning about this subject through your teacher. Otherwise, the results will be skewed. If you choose a community such as a club or a church, you may want to ask help to conduct the survey to someone who participates or has a leadership role in that group. Public events such as a festival, carnival or even at a mall are great venues to reach people to make questions. Let them know the questions are for a science project. Whoever is your audience, their responses will show you their level of understanding of the issue and how much they care.

Tips for conducting a community assessment:

- Develop a survey with 5-8 questions that can help you gauge how much your audience knows about MDR¹. Think about your audience's age when you develop the questions.
- Make questions such that the answers are easy to grade. Poorly developed questions get poor responses. Avoid including open-ended questions. These are hard to grade and analyze.
- Calculate the % of answers chosen per question. Use this data to choose your project proposal (the What in Step 3). The survey results will help you strategize your outreach campaign.
- How many people to ask? Survey 40-50% of the people in the audience you have chosen if it has < 200 individuals (i.e. a church). Survey 20-39% if has >200<1000 individuals (i.e. a school). Survey 10-19% of audience has >1000 people (a town). Divide and conquer! There are more than 2 members in your team.

Table 1. Sample questions for assessing knowledge and understanding of MDR in a community

Sample questions (you can develop your own)	Possible answers
1. Have you ever visited the Ventura River?	(Yes/ No)
2. Do you know that there is a relic Dam on the river called Matilija Dam and that it holds water and soil?	(Yes/ No)
3. Do you know which of the two endangered anadromous fish is found in Ventura River that could benefit from the removal of the dam? Mark with an X the answer	Salmon___ Southern Steelhead Trout___

¹ Matilija Dam Removal



4. Do you think this fish would swim and reproduce easier if there was no dam holding the water?	Yes____ No____
5. Did you know the dam is holding about 800,000 cubic tons of sand and soil that could replenish our beaches?	Yes____ No____
6. Do think the dam should be removed or stay where it is?	Stay__ Remove it__ I don't know__ Do not care____
7. If you think it should be removed, what would you be willing to do to support its removal?	

Examples of how to develop a community assessment (survey):

The document in the link below has examples of student-authored surveys. The questions are not about the removal of the Matilija Dam, but the paper can help you to design your survey.

http://www.whatkidscando.org/specialcollections/student_as_allies/pdfs/saa_samplesurveys_final.pdf

STEP 3. Choose your project objective(s) 'THE WHAT': (15 possible points)

Now that you have an idea of how much your chosen audience knows about Matilija Dam removal through the community assessment, now ask yourself: **What do you want your audience to know that does not know yet in regard to the impacts of the Matilija Dam on the Ventura River?; How can you help them learn more? or be aware of better? Then ask yourself, is it doable? By when? The answers to these questions in one or a few sentences are your SMART objectives.** Your project proposal can have one or multiple objectives and must be specific and realistic.

Examples of objectives:

- To increase by 35% the understanding of the students in my school campus about how a rivers' plants or animals life cycle can be impacted by a dam, or the sand on the beaches adjacent to the river, or the transportation of nutrients into the ocean through a 1 month on-campus outreach campaign by 04/15/24.
- To increase by 50% the awareness of impacts of the Matilija Dam on Ventura River during an Earth Day community festival by using banners, posters, fliers by April 23, 2024
- To increase by 75% the knowledge of the members of the 'X' Club in 'Y town' of causes and impacts of a dam on a river through an outreach campaign that includes presentations during 'X' Club meetings, social media and a website by April 8, 2024

Write below your objectives to be specific on what you want to change, how much and by when. These are called SMART Objectives!

SMART Objectives:	Are sentences that say what you want to modify. They are S pecific (what will be the action/campaign do or change, knowledge, understanding, care?) M easurable (i.e. how much do you the audience know before and after the campaign? A ttainable (ask yourself if this is possible); How many people will know more; Then is the R ealistic? (this is for you to think, not to write it). T ime bound. That is, if the proposal is to be implemented, by when?
Objective #1	



Objective #2	

STEP 4. Design your project's METHODS. This is 'THE HOW' (25 possible points)

The methods are how your team proposes to increase the knowledge or awareness of **MDR (Matilija Dam Removal)** assessed in STEP 2, to make the specific change of what, how much and by when (as described in your objectives in STEP 3). In this step you describe HOW (step-by-step) you propose to make the change(s) happen. Choose your methods based on the information collected during the community assessment (survey). The products, services, or tools you propose to create as part of the campaign are your **outputs**.

Project A example:

Goal: Design of a public awareness campaign about **MDR** that increases the understanding of this issue among a community

Objective (example): To inform all the members of the 'X' Club in 'Y town' of causes and impacts of MDR through an outreach campaign that includes presentations during the 'X' Club meetings, social media and a website by April 21, 2024

Methods (example):

- Our team will develop an outreach campaign tailored for 'X' Club based on pre-campaign survey results, which will make emphasis on the 'A', 'B' and 'C' concepts which were misunderstood by most surveyed persons.
- The campaign will include 'Z' **outputs**. These outputs include: 'W' presentations to 'X Club' during XX month of 2024 year. The presentation to club members will include project proposals that can reduce the carbon footprint of our school campus that do not require much investment and were created by previous students of our school who also entered the EECCOA Challenge.
- The second output is a website we will develop focused on **MDR** and ways Ventura youth and adults can support its removal.
- The 3rd output is an instagram account created for the campaign with 'N' postings per week
- The 4th output is an article published in our school's paper

Note the above example is theoretical; it is just to give you an idea.

Write below the methods you propose to reach your project proposal goal and objective(s):

Methods:	Outputs (products you will develop as part of your campaign)	Timeline (when will you develop or launch the outputs)



STEP 5. Figure out how to measure your project's effectiveness. This is called project EVALUATION (10 possible points)

This is where you describe how to determine the successful impact of your project proposal after it is carried out. Imagine it happens, that all you propose is conducted. How would you measure the changes (from your proposed actions (the methods in STEP 4).

	Write here how would you be able to see or measure increased knowledge or interest in changing behaviors after implementing your campaign
Example of evaluation measure for the sample in step 4	We know we increase by 75% the knowledge of 'X Club' by measuring their knowledge through post campaign evaluation surveys that asked the same questions as during the pre-campaign community survey. We estimate the surveyed people will know 75% more during the post campaign than during the pre-campaign survey.
Write here your evaluation Measures	

You can have more than one evaluation measure, and more than one may be more reliable and convincing of the value of your proposal.

STEP 6. Outline a COMMUNICATION plan for your proposal to let others know of your project, actions, or to persuade your audience to change certain behaviors (25 possible points maximum).

During the campaign make sure it includes clear and compelling messages focused on the areas more unknown or misunderstood by your assessed audience. The more your project proposal becomes an executed project, the more points you receive and chances to win.

Examples:

- Present your proposal at a meeting of your school district's board, a City Council meeting, the 'X' Club, or a PTA meeting of your school using the created outputs you propose in STEP 4 (25 points)
- Create a video, podcast, or a graphic (25 points) – Your teacher will have resources on how to create an effective outreach campaign through a video, podcast or a graphic



	Write here how and when would you educate, inform or engage your audience about the Matilija Dam and why it should be removed.
Phase 1:	
Phase 2:	

Adults have done a lot of work, but not so much youth. However, you do not need to reinvent the wheel! Below are on-line resources with examples or for inspiration for other campaigns that address other issues, but the methods are the same.

- Examples of how multimedia is utilized to reach our community:
<http://pbskids.org/plumlanding/video/index.html>
- Check our other EECCOA students' projects winners of prizes at
<https://meritostaff.wixsite.com/eeccoachallenge/winnersandtheirprojects>
or <https://www.youtube.com/user/MERITOAcademy/playlists>

PROJECT PROPOSAL FORMAT: The project proposals should be presented as a verbal (oral) presentation using PowerPoint, Google slides or Sway or, if you create a video or podcast, the easiest would be a YouTube video link or a MP4 video. Presentations must last 5 minutes maximum per team. Submit the ppt, video or podcast or pdf to your teacher on the date provided by her/him/them. We will collect all proposals through Google Drive from your teacher. Students can produce their own videos if they want and are encouraged to do so. Previous students have shown to be very creative. We offer extra points for teams who record their own video and embed the slides into the video.

A successful project proposal needs to include all 6 steps above described. This how much each step is worth:

1. Project summary with name of team, project title, authors (students names), school name, and teacher's name: 5 points
2. Assessment/audit results: 20 points
3. Objective(s): 15 points
4. Methods (including any costs and budgets): 25 points
5. Evaluation method(s): 10 points
6. Communication plan: 25 points

For guidance, please contact: info@meritofoundation.org



Information on the Matilija Dam

A concrete arch dam built in 1947. Infamous for the scissors painted on the dam by graffiti artists in 2011 that have become an iconic symbol for dam removal, it was originally designed for water storage and flood control.

Matilija Dam is located on the ancestral land of Barbareño/Ventureño Band of Mission Indians.

THE PROBLEM: The reservoir behind Matilija Dam is nearly completely clogged with sediment, significantly reducing storage capacity to the point that the dam is rendered non-functional. With no fish ladder or bypass structure present, it is a complete barrier to the migration of endangered Southern California Steelhead. The dam also causes degraded water quality, an altered flow system, and a disorder to the sediment flows going to the lower watershed, the estuary, and beaches, which they need to replenish themselves.

AIM : Ventura County Public Works Agency – Watershed Protection (or simply just Watershed Protection) is working towards removing the obsolete Matilija Dam (*muh-TIL-i-hah*) from Matilija Creek, the Ventura River’s largest tributary/stream. *since 1999*

PURPOSE: The Matilija Dam Ecosystem Restoration Project (MDERP) is a multi-component endeavor that hopes to enhance the Ventura River watershed to benefit native wildlife, restore ecosystem function, and enhance local water resilience.

HOW?

- *Modernizing downstream infrastructure*
- *Catalyzing job creation and economic stimulus*
- *Restoring natural sediment transport and ecosystem function*
- *Enhancing outdoor recreation opportunities*
- *Conserving water and protecting habitat*
- *Renewing access to prime spawning and rearing habitat*

Removal of the dam is a complicated process. It involves many studies, engineering and political will. The Ventura County officially made the decision in 1998 to officially remove the dam. Various environmental groups have worked with VC in pursue of the removal of the dam for the past 30 years. Notably the work of Paul Jenkins of Surfrider Foundation. Most recent worthy accomplishments are: In March 2016, the group overseeing design alternatives voted in favor of a removal plan, and as of summer 2022, the plan is to have the dam removed by 2030.



REFERENCES:

<https://matilijadam.org/>

<https://caltrout.org/campaigns/matilija-dam>

<https://www.vcpublicworks.org/wp/nderp/>

More Resources on the Matilija Dam

1. Matilija Dam Ecosystem Restoration Project
<https://matilijadam.org/>
2. <https://storymaps.arcgis.com/stories/193dc29701ae4e6b81f57a5c9cd024ef>
3. Paul Jenkins is Program Manager at Surfrider Foundation and Lead of the Matilija Dam Coalition. He is talking about the dam and some of the hurdles that have come up [here](#)
4. Paul at a Surfrider Foundation event about a year ago [here](#).
5. His blog about the Matilija Dam: <https://www.venturariver.org/2008/09/fish-monitoring-on-ventura-river.html>
6. A similar dam in Northern California that was removed a few years ago. The link to that project is [here](#).
7. First prize winner of EECCOA Challenge 2022 video created linked here:
https://youtu.be/6EtjPA_7YHY

*More resources can be found under the "Online Resources" tab:

<https://meritostaff.wixsite.com/eeccoachallenge/online-resources>