

The Coeur d'Alene Tribe

COEUR CENTER SOLAR PROJECT

NOVEMBER 18, 2022

BY TIFFANY ALLGOOD, EAP COORDINATOR

Presentation Summary

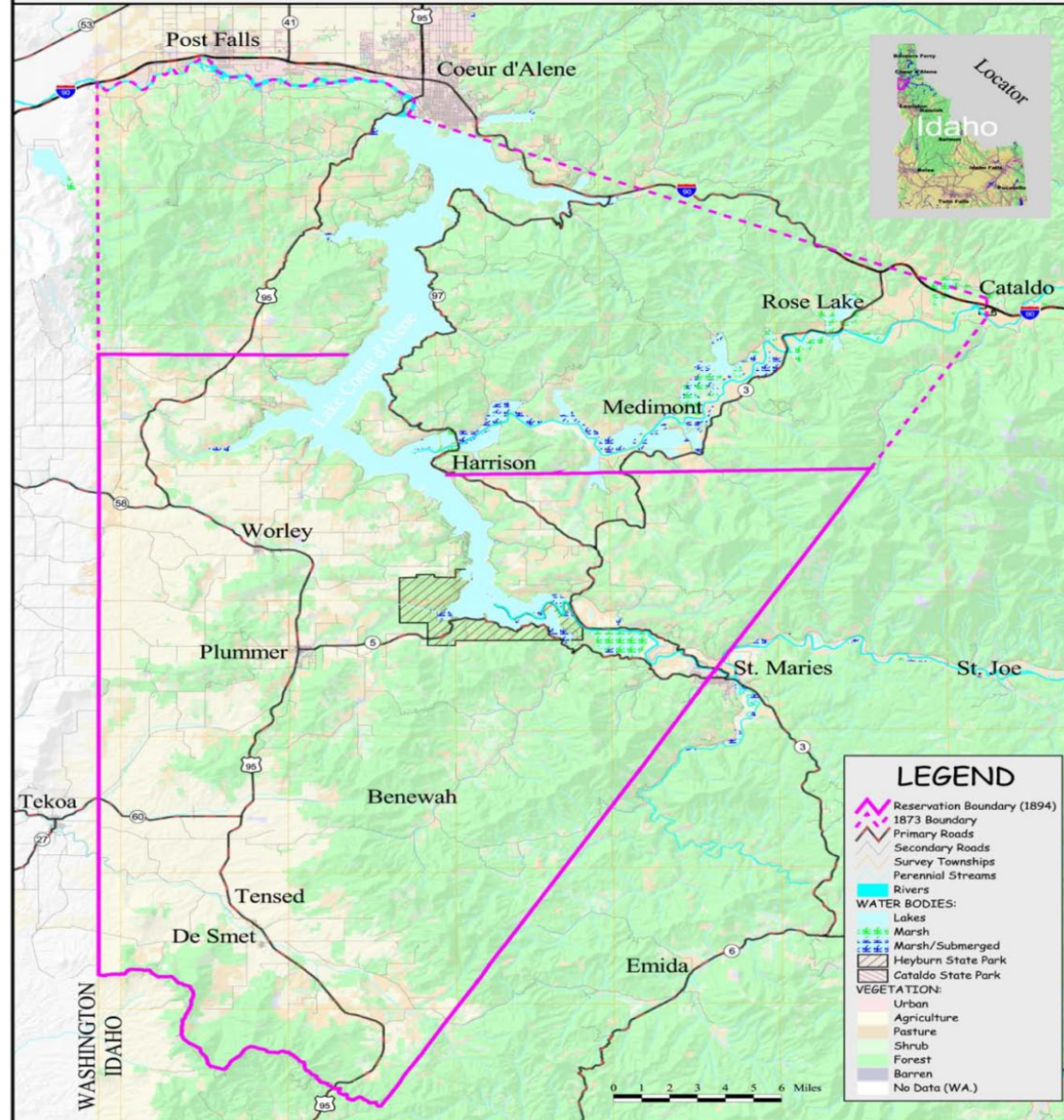
- ▶ Overview of the Coeur d'Alene Tribe
- ▶ Previous Tribal energy work
- ▶ Coeur Center Solar Project
- ▶ Next Steps
- ▶ Lessons Learned
- ▶ Contact Information

Overview of the Coeur d'Alene Tribe

- ▶ The Coeur d'Alene Reservation is approximately 334,000 acres, not including Tribal submerged lands.
- ▶ Aboriginal territory = more than 5 million acres.
- ▶ 6,760 residents according to the 2010 Census.
- ▶ Tribal enrollment is 2,554 and growing (December 2020).
- ▶ Tribe relies on forestry, agriculture, gaming, etc. in the current economy.
- ▶ Tribe continues traditional subsistence activities such as fishing, hunting and gathering foods and medicine.



Coeur d'Alene Reservation



Coeur d'Alene Reservation



Coeur d'Alene Reservation



Coeur d'Alene Tribe -

<https://www.cdatribe-nsn.gov/>

Mission Statement

We shall preserve and maintain at all costs our inalienable right to exist as a sovereign nation of people, speak our language, practice our traditions and culture, serve as protectors and stewards of our Mother Earth, respect our elders in everything we do, endeavor to build a future for our children and coming generations that is improved and better than what we ourselves inherited, and promote proud, healthy and vibrant communities and families.

Vision Statement

The Schi'tsu'umsh, Coeur d'Alene Tribal Nation, forever guided by the traditional values of our great leaders of generations past, shall be the "model government" of the world, united as one under the K'olunsuten, with love for our tribe, harmonious with our natural world and the Mother Earth, proud in the strength of our community development, but remaining who we are, who we were meant to be and who we always shall be: Schi'tsu'umsh, Coeur d'Alene Indians!

Tribal Natural Resources Department

- ▶ In 1992, the Tribal Natural Resource Department was established as a stand-alone Department
- ▶ The NR Department has many programs in it: Air Quality, Culture, *Environmental Programs Office*, Fisheries and Wildlife, Forestry and Fire, Hazardous Waste, Land Services, Pesticides Circuit Rider, Recreation, and Water Resources
- ▶ The Environmental Programs Office in the NR Department has been applying for and administering most of the energy grant work



Coeur d'Alene Tribe

Energy Efficiency Assessment Report

PLUMMER, ID
JUNE 2012

Prior Work

June 2012 – The Tribe completed its energy efficiency report on 34 Tribal government buildings



Prior DOE Work

- The Tribe completed its Energy Efficiency Feasibility Study in 2014



Coeur d'Alene Tribe Energy Efficiency Feasibility Study



Coeur d'Alene Tribal Benewah Medical Center Front Entrance

Prepared for the Coeur d'Alene Tribe
Environmental Programs Office in the Natural Resource Department
by:



September 2014
Technical Report for the U.S. Department of Energy
Assistance Agreement Award #DE-EE0005170

Prior DOE Work:

Benewah Market Energy Efficiency Project

- ▶ Owned by the Tribe
- ▶ Located in Plummer, ID
- ▶ Approximately 16,000 square feet
- ▶ Only full service grocery store in a 35-mile radius



Prior DOE Work:

Benewah Market Energy Efficiency Project

- ▶ The Benewah Market EE Project Replaced:
 - ▶ 14 aging floor cases with high efficiency cases
 - ▶ 16 individual compressors for the refrigeration cases and walk-ins
 - ▶ Roof top condensers
 - ▶ 15 evaporators in the walk-in coolers and freezers with high efficiency units
 - ▶ Refrigerant lines

Prior DOE Work:

Benewah Market Energy Efficiency Project

- ▶ The Benewah Market EE Project was projected to:
 - ▶ Save at least 30.8% of the total energy used at the Market
- ▶ The Benewah Market EE Project Actually Saved:
 - ▶ 22.9% of energy use compared to pre-project energy use

(There was an over-estimation of the older equipment's inefficiency, and the Tribe did not install a heat recapture system to replace the one that was installed on the old equipment)

Prior DOE Work: Benewah Market Energy Efficiency Project

- ▶ Lowered operating costs
- ▶ Lowered maintenance costs
- ▶ Improved perception of overall store
- ▶ Improved food quality
- ▶ Increased Tribal pride in store
- ▶ Received community support & appreciation
- ▶ Increased store sales



Prior DOE Work: Benewah Market Energy Efficiency Project



BEFORE



BEFORE

Prior DOE Work: Benewah Market Energy Efficiency Project

New Compressors



Prior DOE Work: Benewah Market Energy Efficiency Project

Produce Department Remodel



Before



Prior DOE Work – Senior Housing Complex Energy Efficiency and Solar Energy Project

- ▶ In late 2018, the Tribe was awarded a U.S. Department of Energy grant for the Tribe's Sennwichen Senior Housing Complex commons area

Senior Apartments



31.12.2003 07:00

Prior DOE Work – Senior Housing Complex Energy Efficiency and Solar Energy Project

- ▶ Focused on the Common Area of the Senior Apartments
- ▶ Installed energy efficiency measures
 - ▶ New LED lighting (inside and outside lights)
 - ▶ New propane hot water heater
- ▶ Installed 52.4 kW solar PV system (ground-mounted)

Prior DOE Work – Senior Housing Complex Energy Efficiency and Solar Energy Project

- ▶ Bonneville Environmental Foundation provided most of the cost share for the project and also provided technical assistance during the project
- ▶ The Tribal Council and the Tribe's Development Corporation's Benewah Market provided the remaining cost share
- ▶ The Tribe was also awarded a Tribal cost share reduction due to covid-19

Energy Efficiency Measures

New Propane Hot Water Heater



New Outside Lighting



Installing the Solar Panels



Installing the Solar Panels



Installed Solar Panels



Inverters

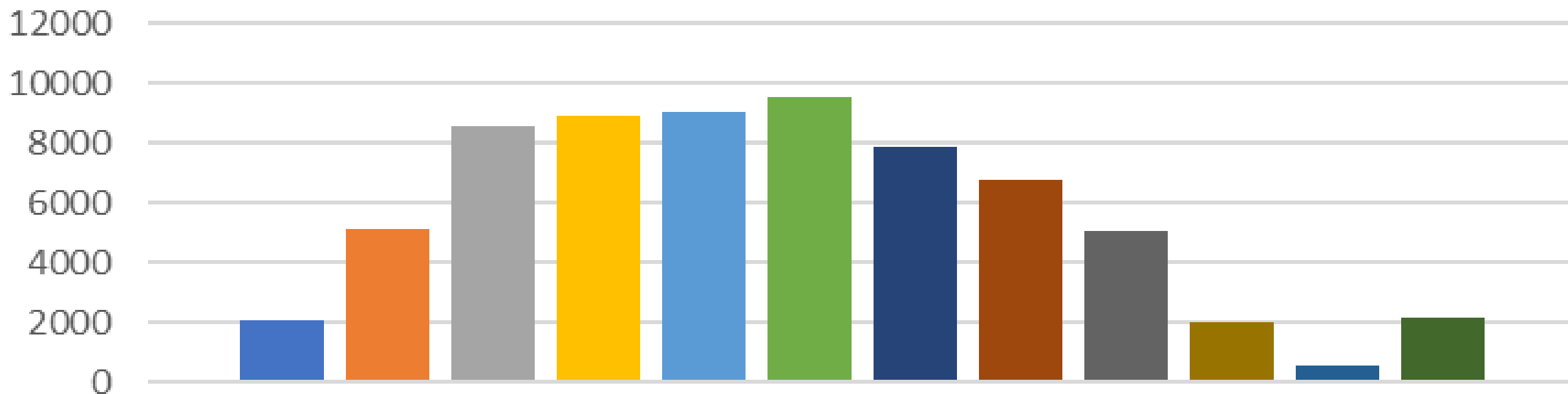


Energy Production and Cost Savings

- ▶ Estimated Energy Production
 - ▶ YEAR 1 = 72,000 kWh
- ▶ Estimated cost savings (combined with the energy efficiency upgrades)
 - ▶ YEAR 1 = \$7,600
- ▶ Estimated Energy Use Savings
 - ▶ YEAR 1 = 99,420 kWh
- ▶ Actual Energy Production
 - ▶ 67,922.97 kWh
- ▶ Actual Cost Savings (combined with energy efficiency upgrades)
 - ▶ \$7,144.56
- ▶ Actual Energy Use Savings
 - ▶ YEAR 1 = 95,192 kWh

Senior Apartments

First Year of Energy Production



1

■ February 2021

■ March 2021

■ April 2021

■ May 2021

■ June 2021

■ July 2021

■ August 2021

■ September 2021

■ October 2021

■ November 2021

■ Decemeber 2021

■ January 2022

Smoke forecast and air quality, August 13, 2021

Bill Gabbert August 13, 2021 Uncategorized smoke



Forecast for near surface smoke at 6 p.m. PDT Aug 14, 2021.

Above is the forecast for the distribution of smoke from wildfires Saturday at 6 p.m. PDT August 14, 2021.

The map below shows the actual air quality in the Western U.S. at 6:46 p.m. PDT August 13, 2021, based on PM2.5 and

SEARCH

FILTER

Month Year
State/Pr Countries
Topics GO



Other Previous Energy Work

- ▶ In 2008, the Tribe's Public Works Department completed a Wind and Biomass Energy Feasibility Study with Bureau of Indian Affairs funding (preliminary)
- ▶ In 2009, Bonneville Power Administration funded Energy Smart of Portland, Oregon to conduct energy audits of the Benewah Market and Benewah Auto on behalf of the Tribe's Development Corporation (reports were completed)

Other Previous Energy Work

- ▶ In 2014, Bonneville Environmental Foundation awarded the Coeur d'Alene Tribe a Solar 4R Schools Program grant to place a 14.25 kW solar photovoltaic system on the Tribe's Natural Resources Department building



<https://cebrightfutures.org/kiosk-coeur-d-alene-tribe-natural-resources>

Other Previous Energy Work

- ▶ In 2018, Bonneville Power Administration's Tribal Low-Income Energy Efficiency Program awarded the Tribe funding to replace all of the refrigerators and clothes washing machines, and some of the bathroom fans in the Tribe's Senior Housing Complex apartments



Other Previous Energy Work – BPA

- ▶ In 2019, the Tribe received additional funding from Bonneville Power Administration's Tribal Low-Income Energy Efficiency Program: The Tribe replaced baseboard heaters with new ductless heat pumps in 19 of the 20 apartments (one had a new heat pump already), as well as the rest of the bathroom fans in the Tribe's Senior Housing Complex apartments
- ▶ The Tribe conducted three energy audits of Tribal homes for future work (the Tribe is contracting with the Community Action Partnership (CAP) in Lewiston, Idaho)

Other Previous Energy Work - BPA

New Heat Pump – outside view



New Heat Pump – inside view



Other Previous Energy Work – BPA

- ▶ In 2020, the Tribe contracted with the CAP and another contractor to do work at three Tribal member homes for energy efficiency and health and safety work
- ▶ In 2021, the Tribe contracted with the CAP to provide energy efficiency measures at one Tribal elder's home

Other Previous Energy Work – BPA



New DOE Energy Work

Coeur Center Solar Project

In September 2022, the Tribe was awarded a U.S. Department of Energy grant for the Tribe's Coeur Center Solar Project.

This is a new youth recreation center on the Reservation.



Coeur d'Alene Tribe

COEUR CENTER SOLAR PROJECT

2317-1602

TOPIC AREA 1.A.

Project Summary

The proposed project will integrate a 35.2 kW solar photovoltaic (PV) system to the Marimn Health Coeur Center in Worley, ID. The Tribe's long term energy goals include "improving the quality of life and providing social and economic benefits across the Reservation." The proposed solar energy project moves the Tribe toward a more sustainable energy system while providing benefits to Tribal and Reservation youth at their new recreation center.

Key Personnel/Organizations

Tiffany Allgood – Project Manager – Tribal Natural Resources
Caj Matheson – Tribal Natural Resources Director
Evan Ramsey – Consultant – Bonneville Environmental Foundation

Budget

Federal funds requested: \$68,129.50
Cost-share proposed: \$68,129.50
Total Project Costs: \$136,259



Project Outcomes

The proposed solar project will save nearly 41,750 kWhs/year of energy which will reduce the Marimn Health Coeur Center's electricity costs by \$2,600 per year. The project will create 0.8 jobs during construction and installation. The payback time for the Tribe's contribution to the project is within 8 years. This effort will help deepen the Tribe's solar impact with an associated reduction in carbon emissions of nearly 1.2 million pounds. This next step in the Coeur d'Alene Tribe's sustainable energy journey will prove the value of solar to the Worley community and help spur additional new solar development.

The solar energy generation will help reduce the total cost of operating the Tribe's youth recreation center.

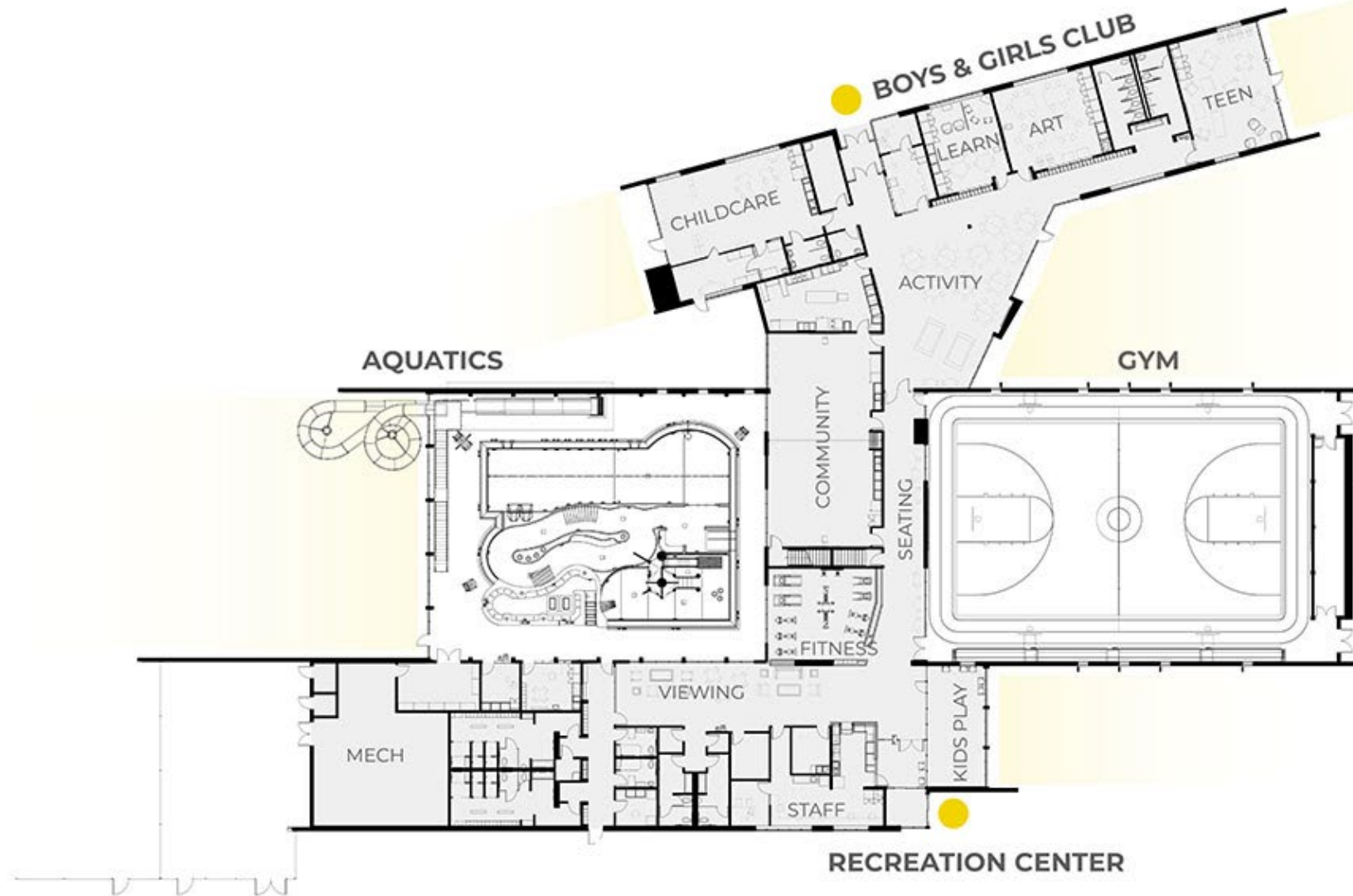
Coeur Center Solar Project Goals

- ▶ Goal 1: Increase use of renewable energy and decrease the Tribe's carbon footprint on the Reservation and at the Coeur Center.
- ▶ Goal 2: Reduce energy costs at the Coeur Center.
- ▶ Goal 3: Provide a solar energy educational opportunity for Tribal community members and Reservation residents at the Coeur Center.
- ▶ Goal 4: Increase the number of Coeur d'Alene Reservation communities that have solar energy by providing the first solar project in Worley on the Reservation.

What's Been Completed ?

- ▶ Evaluated the roof of the Coeur Center for solar panels
- ▶ Submitted the initial National Environmental Policy Act information to U.S. DOE for the project
- ▶ Received the award from DOE in mid-September 2022

Floor Plan of the Coeur Center



Coeur Center



What's Been Completed ?

- ▶ Executed a funding agreement with Bonneville Environmental Foundation in support of this project
- ▶ Executed a funding agreement with Grid Alternatives – Tribal Solar Accelerator Gap Fund (the Tribe expects that labor and materials costs have gone up considerably since the application was submitted)
- ▶ Preparing for a Kick-Off meeting with an internal workgroup in December 2022

Next Steps

- ▶ Begin working with the Tribe's utility provider on the interconnection agreement and execute at the appropriate time
- ▶ Advertise a request for proposals for a design/build solar installation contractor
- ▶ Complete a contract with the selected solar installer

Next Steps

- ▶ Continue to coordinate with Tribal departments throughout the project and especially before installation
- ▶ Begin coordination for the electrical inspection(s)
- ▶ Work with the Tribe's Historic Preservation Officer prior to installation
- ▶ Procure materials for project

Next Steps

- ▶ Look for training opportunities to be included in the project
- ▶ Install the solar panels on the roof of the Coeur Center
- ▶ Final inspection and system commissioning
- ▶ Collect energy use and cost data for one year and include the results in a final project report

Lessons Learned

- ▶ It may be a little too soon to have any lessons learned on this project; however...
- ▶ Anticipate the need to build in contingency for possible price increases

Contact Information

- ▶ If you would like more information, please contact:
- ▶ Tiffany Allgood, Environmental Action Plan Coordinator, at (208) 686-8802, tallgood@cdatribe-nsn.gov (RETIRING SOON)
- ▶ Laura Laumatia, Environmental Programs Manager, at (208) 686-0500, laura.laumatia@cdatribe-nsn.gov

Thank you for your time today