



# COMMUNICATION FRAMEWORK

## FOR SOLAR ENERGY PROJECT PROPONENTS AND STATE FISH AND WILDLIFE AGENCIES

The Association of Fish and Wildlife Agencies (AFWA), American Clean Power Association (ACP), and the Energy and Wildlife Action Coalition (EWAC) recognize the practical value and mutual interest of opening and maintaining lines of communication between large-scale, ground-mounted photovoltaic (PV) solar energy project proponents (i.e., developers, owners, operators, or other project representatives such as biological consultants) and state fish and wildlife agencies. AFWA represents the collective perspectives of state fish and wildlife agencies (SFWAs) in all 50 states. These agencies exercise primary statutory authority for management of fish and wildlife as public trust resources within their borders, unless specifically preempted by a federal statute, and provide critical scientific expertise and technical guidance on the effects of energy development on species and their habitats. ACP and EWAC collectively represent companies who develop, permit, construct, own, and operate the vast majority of the large-scale, ground-mounted PV solar energy in the United States. Communication between project proponents and SFWAs during PV solar energy siting and development, construction, operations, and decommissioning is a crucial step towards evaluating and addressing the potential impacts to species that are of interest (which includes those based on state-specific priorities, and which may include more than legally protected species) and their associated habitats. Although this document was developed with discussions around these large-scale, ground-mounted PV solar energy projects, the framework provided in this document can be utilized for other solar projects, regardless of size, especially when direct or indirect wildlife-related impacts may be present.

In 2023, ACP and AFWA collaboratively developed and published the [Communications Framework for Wind Energy Project Proponents and SFWAs](#), which is specific to wind energy. Although many communication components are shared between the Wind Energy Communications Framework and this Solar Communications Framework, there are key differences in the technology, siting and development process, and wildlife and habitat impacts associated with large-scale, ground-mounted PV solar development and operations that result in variations between the two documents. The stages of development – relationship building, preliminary area assessment, site characterization and design, construction, operations, and decommissioning – are different than those in the Wind Communications Framework because that document was based on the tiers defined in the [U.S. Fish and Wildlife Service’s Land-based Wind Energy Guidelines \(2012\)](#). The stages of development in this Solar Communications Framework are intended to broadly reflect a common sequence of activities project proponents normally undertake and are defined below.

The framework was developed collaboratively by AFWA, ACP, and EWAC members who actively listened to each other’s perspectives and concerns, engaged in candid discussions about communication challenges, and sought to create a mutually beneficial and voluntary framework. Importantly, this framework does not prescribe a set of rigid steps or instructions. There is substantial variation at the state and/or regional level among SFWAs, project proponents, and wildlife and habitat concerns and, as such, the framework is intentionally flexible and relevant to all large-scale, ground mounted PV solar projects. This framework is nationally focused and establishes a set of communication objectives and milestones that are flexible enough to address state and/or project-specific concerns. It serves as a guide for early and iterative communication in good faith between project proponents (or their representatives) and SFWAs that establishes expectations for the frequency of engagement and the suggested communication triggers. SFWAs and project proponents recognize that a cornerstone of mutually beneficial communication is the reliance on best available science and/or local biological knowledge to inform suggestions, questions, recommendations, and decisions. These open communications can also help inform discussions about equivalent conservation measures that could be more feasible for a project to implement and/or research opportunities the parties may elect to collaboratively pursue.

### CONTACT US

Meaghan Gade, [mgade@fishwildlife.org](mailto:mgade@fishwildlife.org)

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Although this framework focuses on communications between SFWA and project proponents, it is vital that all parties also communicate internally within their own teams. This internal alignment is key to avoiding misunderstandings and increasing efficiency and consistency across stages of development and construction of the facility. Further, it is important to consider relevant communication with other stakeholders. When federally protected species may be involved, parties are encouraged to invite the U.S. Fish and Wildlife Service (and/or other agencies, as appropriate) to participate in communications as well to maintain transparency and avoid duplication of effort, consistent with confidentiality limitations of the parties.

AFWA, ACP, and EWAC recognize that maintaining effective communication can be difficult due to various factors, both within and beyond the control of project proponent and SFWA representatives. Every project is unique, and the communications between project proponents and SFWA will vary in duration and cadence; therefore, both parties share a responsibility to proactively communicate and remain responsive to each other. It is crucial to understand that this framework is a tool for facilitating better communication and building collaborative relationships while allowing flexibility in adoption and implementation by all parties involved.

## STAGE DEFINITIONS

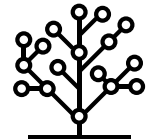
Relationship Building – This stage is focused on establishing and maintaining relationships between state fish and wildlife agencies and solar project proponents. This should be an ongoing and continual process that occurs from the time a project proponent considers development in a state and throughout the prospecting, siting, development, construction, operations, and decommissioning of the solar project. The extent of this stage may vary depending on existing relationships, local knowledge, and experience in a given state, but early and iterative communication is key.



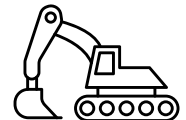
Preliminary Area Evaluation – This stage refers to ‘big box’ evaluation stage when project proponents are prospecting and taking a first look at a broad geographic scale for a preliminary evaluation of the general ecological context of a potential area of interest.



Site Characterization and Design – This stage includes further analysis into desktop information, initial site visits, and deciding what the project proponent might need to do further on site. This stage begins when site design is still fluid and continues through final design. During this stage, identification of additional field work or studies, if any, may occur and be implemented. This stage may also include federal, state, or local permitting.



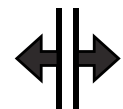
Construction – This stage includes preparation for construction, typically when the design is near final and activities move to execution of the design. In addition, this stage includes ground disturbance activities (e.g. clearing and grading), installation of the piles, solar arrays, inverters and ancillary facilities (including the generation tie-line), and the initiation of reclamation activities of temporary disturbances to restore drainage and vegetation.



Operations – This stage refers to when the site is energized and producing and delivering power and includes maintenance activities to ensure the facility is in compliance with laws, permit requirements, and/or operator commitments. It may also include completion of reclamation activities, if warranted.



Facility Decommissioning – This stage occurs when the facility reaches the end of its operational life and the operator plans to remove equipment and transition the land to its post-power land use.



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Stage	Communication Framework Elements	Communication Milestone Triggers
<p><b>Relationship Building</b></p>	<ul style="list-style-type: none"> <li>It is recommended that project proponents contact the SFWA for an introductory discussion to provide affiliation, contact info, and nature of the potential development activity. It is further recommended that SFWAs provide accurate renewable energy contact information and for project proponents and SFWAs to communicate any changes in points of contact within their respective organizations to maintain lines of communication.</li> <li>In establishing a line of communication, project proponents and SFWAs are encouraged to exchange respective expectations for how often to check in with each other (e.g., based on project milestones or a timeframe) and the preferred method of communications (e.g., verbal, meeting notes, email exchange, official correspondence, etc.). Project status updates, including information about delays or lack of meaningful activity, will be welcomed by SFWAs.</li> <li>To develop a viable project and address conservation concerns, it is important for the SFWA and project proponent to communicate while the siting and design may still be flexible. In addition, the SFWA and project proponents are encouraged to maintain communication as new data or information relevant to the project's design becomes available. It is important for the SFWA to share new data and science with the project proponent to facilitate educated development decisions.</li> <li>Project proponents and SFWAs are encouraged to discuss confidentiality concerns relating to data and information sharing between parties. Communicating the sensitivity or proprietary nature of the project proponent or SFWA's data and information will establish distribution parameters between the parties.</li> <li>Project proponents are encouraged to invite both SFWAs and local U.S. Fish and Wildlife Service (USFWS) contacts (if federally protected species or their habitat may be impacted) to participate in communications to maintain transparency and to avoid duplicating efforts. A project proponent is encouraged to utilize the Information for Planning and Consultation (IPaC) tool as an early coordination resource to identify whether federally protected species may be present and to inform a decision on any communication needs with USFWS.</li> <li>SFWAs and project proponents should discuss any species that are of interest based on state-specific priorities, which may include more than legally protected species. All parties should recognize there may not be a regulatory obligation regarding these species and that some recommended actions are voluntary for the project proponent/operator.</li> <li>Be generous with assumptions; respect the words, intentions, and actions of each party.</li> <li>Be respectful of timeframes and capacity. Parties are encouraged to respond to each other's inquiries in a timely manner by acknowledging inquiry receipt and, for inquiries that necessitate time to compile a response, an estimated time to respond fully.</li> </ul>	<p>On-going effort; it is recommended to incorporate these elements in all stages of communication and project development and construction; communication related to operations and decommissioning relevant in certain circumstances addressed below.</p>
<p><b>Preliminary Area Evaluation</b></p>	<ul style="list-style-type: none"> <li>The SFWA has publicly available tools, data, and information to assist project proponents with preliminary site evaluations. Project proponents and SFWAs can discuss the availability of additional (including non-public) or more current information and data and request additional information, as applicable.</li> <li>SFWAs are encouraged to provide information about SFWA websites related to coordination and renewable energy to AFWA to facilitate an inventory of website resources that may assist project proponents during preliminary area evaluations.</li> <li>Project proponents may review prospective development areas or review other information or priorities from prior discussions with the SFWA. To the extent information is not privileged, SFWAs will provide the project proponent any specific regional wildlife and/or species that are of interest considerations.</li> <li>Project proponents will share preliminary information on project plans (i.e., area under consideration, planned schedule, potential MWs, and siting constraints) that impact design flexibility (i.e., wetlands, setbacks, or other state/local requirements, etc.)</li> </ul>	<p>Requests for wildlife and habitat information and data; changes in project ownership; significant changes in project area after preliminary site evaluation studies are complete.</p>



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<p style="text-align: center;"><b>Site Characterization and Design</b></p>	<ul style="list-style-type: none"> <li>• Project proponents and SFWAs may want to review information discussed in Preliminary Area Evaluation stage to determine if the project proponent has access to the most comprehensive and current resources needed to develop a viable project that also evaluates and considers conservation concerns. Either party may request or provide additional information, as applicable.</li> <li>• When responding to requests for information, SFWA will provide current fact- and/or science-based information, local biological knowledge, or data that supports its cautions, concerns, or suggestions.</li> <li>• Commensurate with the scale of development activity, it is recommended that project proponents update SFWAs of changes in project(s) status as a result of on-site evaluations or other knowledge gained relevant to SFWA's purview or as previously agreed upon.</li> <li>• Project proponents and SFWAs are encouraged to discuss SFWA beneficial practices or feedback and to collaborate on the planning, design, and/or survey efforts of a project, recognizing there may be equivalent conservation measures and understanding that other land uses and constraints impact project planning (e.g. state/local siting requirements, FERC/NERC reliability and safety requirements, etc.).</li> <li>• Prior to submission, project proponents and SFWAs are encouraged to discuss SFWA recommendations that may be submitted to a formal federal, state, and/or local permitting process, where required or relevant.</li> <li>• If a decision to conduct field surveys is made, project proponents or their biological consultants are encouraged to review field survey approaches and methodologies with SFWAs prior to data collection, including when to conduct the survey, for which species that are of interest and their habitat(s), and for how long surveys are valid. When federally protected species are involved and a decision is made to conduct field surveys, communication about survey approaches with USFWS is also encouraged.</li> <li>• SFWAs and project proponents are encouraged to structure site surveys based on best available science, federal or SFWA published guidance (if available), and/or generally accepted practices. Should a generally accepted practice be referenced, it is encouraged to be shared with the SFWA.</li> <li>• As project development proceeds, it is recommended that a project proponent notify the SFWA of material changes to project design that may have potential wildlife or habitat implications. Communication triggers, which can be temporal- or milestone-based, should be mutually agreed upon early in the development effort (see Relationship Building and Preliminary Area Evaluation stages).</li> <li>• Survey results and SFWA responses to those results will be shared in the manners mutually agreed upon.</li> </ul>	<p>Change in project ownership, project area, project schedule; completion of habitat and wildlife-related site characterization studies; modifications or updates to SFWA's data, maps, or other planning related information; survey methodology development; interim or final results of field surveys; project design changes with wildlife or habitat implications; or state/local permitting recommendations.</p>
<p style="text-align: center;"><b>Construction</b></p>	<ul style="list-style-type: none"> <li>• Project proponents will notify the SFWA upon reaching agreed upon project milestones.</li> <li>• If final design changes are made that could impact species that are of interest or their habitat differently than what was discussed with SFWA in an earlier stage, project proponent will reach out to the SFWA in the manner previously agreed upon.</li> <li>• If pre-construction surveys are warranted as discussed with SFWA during site characterization and design stage, the project proponent and SFWA will discuss and review the survey timing, any related permits or conditions, data and results, and next steps based on the results, if necessary.</li> <li>• If there is an unanticipated presence of any species that are of interest or an unexpected impact to species that are of interest or their habitat during any phase of construction, the project proponent will communicate with the SFWA about how to proceed.</li> </ul>	<p>Project milestones; unanticipated presence of or unexpected impact to species; final design changes; survey initiation and milestones.</p>

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<p><b>Operations</b></p>	<ul style="list-style-type: none"> <li>• SFWA and operator will continue to communicate as mutually agreed upon (e.g., additional research or surveys).</li> <li>• If there is an unanticipated presence of any species that are of interest or an unexpected beneficial or negative impact to species that are of interest or their habitat during facility operations, it is recommended that the operator communicate the event with the SFWA and discuss how to proceed.</li> <li>• If an operator is planning to repower a facility with upgraded technology or related changes that could impact species that are of interest and/or associated habitats, it is recommended the operator communicate with the SFWA regarding the plans.</li> </ul>	<p>On-going effort; unanticipated presence of or unexpected impact to species; plans to repower or significantly change a facility.</p>
<p><b>Facility Decommissioning</b></p>	<ul style="list-style-type: none"> <li>• As a project approaches facility decommissioning, the operator will communicate with the SFWA about wildlife considerations present at that time. Parties recognize that this information may not be available until much closer to when this activity is expected to occur.</li> </ul>	<p>Upon consideration of or planning for facility decommissioning.</p>



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