



TRARO

Narrative Export

Project Summary

Value Based Forest
Restoration Housing

Organization WoodSyn

RFP Name GKS TRARO

Exported On May 28, 2026

Status Final

Total Score 51.91 / 60.00



Overview

Reviewer Score

N/A

Reviewer Feedback

The submission is strong overall and presents a clear, coherent narrative from macro problem to specific constraint to solution. The emphasis on repeatable assemblies, documented performance, and code acceptance as the adoption gate shows an understanding of how innovation actually moves through housing, code, and public-sector systems. In most areas, the responses not only answer the questions but do so with specificity.

Several elements stand out as particular strengths. The Practices and Precision sections are clear about what will be done, why those practices were chosen, and how success will be measured over time. The monitoring plan focuses on the right things (restoration throughput, carbon stored in products, housing resilience, community economics) and backs them with concrete data sources and thoughtful safeguards around Tribal data and resident privacy. The Policy section demonstrates fluency with NEPA, ICC-ES, NAHASDA, and 2 CFR 200, and pairs that understanding with practical mitigation strategies. The Stakeholders and Partners sections also do a good job mapping the key roles (WoodSyn, QV, Habitat, Tribal housing partners, future portfolio manager) and linking them to the practices and outcomes described elsewhere.

The opportunities for improvement are relatively small and focused more on tightening than on changing direction. In a few places, the submission appropriately identifies critical roles or payors in category terms (e.g., "Tribal housing partners / Indigenous community stakeholders," "Nonprofit Housing Portfolio Manager (TBD)") without always tying them to specific, named entities or examples of past collaboration. Where questions explicitly asked for concrete commitments or evidence (such as stakeholder co-creation, payor intent to purchase, or depth of track record) the responses often provided a strong conceptual picture and emerging pipelines, but stopped short of naming particular partners, signed instruments, or prior projects. Adding one or two very specific examples (e.g., a named Tribal housing authority, a prior H4H NAZ project, or a documented letter of interest) would further strengthen what is already a high-performing narrative.





Proponent Response

Please respond to each question below.

A. What is your elevator pitch for your proposed project or business model/plan (what is the essence of your proposed project or business plan)? (Up to 1000 characters)

WoodSyn will deliver a first-cohort Tribal housing demonstration with Habitat for Humanity Northern Arizona using sustainably sourced, European-manufactured wood wool cement (WWC) components to prove constructability, a fire-resilient enclosure pathway, thermal comfort/efficiency, and durability in real builds. The cohort produces a repeatable “adoption package” (spec-ready assemblies, QA/QC, install guides, and AHJ/EOR submittals) plus real operating learnings from stewarded homes—creating the proof needed to unlock investment in domestic U.S. WWC manufacturing and a stable end market for verified restoration fiber (Value-Based Forest Restoration, VBFR). Independent RTL analysis supports this focus: “wood wool cement large wall elements” show the highest EBITDA return to fiber (\$416/BDT) while noting U.S. code acceptance as the key hurdle—exactly what this phased demo is designed to solve.

B. What is the anticipated geographic scope of your work? (Up to 500 characters)

Phase 1 is based in Northern Arizona (WUI context), delivering an initial cohort of 6-12 single-family homes (or equivalent building area) with Habitat for Humanity Northern Arizona and Tribal partners. The model is designed for replication into additional Tribal and rural WUI communities across the Interior West as documentation and manufacturing scale mature.

C. Please provide the following proponent Information: *Company Legal name* Entity type
Contact person Address Phone (with country code) Country * Website

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Springer: Problem

Reviewer Score **13.13/15.00**

Reviewer Feedback

i) The response does an excellent job framing wildfire risk in Northern Arizona as a throughput constraint in forest restoration rather than a planning problem. The explanation of how each treated acre generates significant small-diameter volume, and how that quickly becomes a supply chain issue at scale, is compelling and easy to follow. The link between losing private industry capacity and slowing treatment pace, leading to higher fuels and community exposure, is especially strong.

ii) The response explains well that the economics of small-diameter utilization do not pencil out under current market conditions, and that this threatens private sector sustainability despite the need to remove large volumes of low-margin material. The description of WoodSyn's role as a durable, higher-value "demand sink" and the VBFR concept ties the business model back to the restoration challenge in a credible way.

iii) The response points to appropriate institutions and messages: Greater Flagstaff Forest Partnership, the Forest Biomass Coalition Working Group, and the Eastern Arizona Counties Organization all appear as sharing the concern about low-value material and the need for additional utilization options. The narrative notes the scale-up in treated acres and the associated pressure on industry, along with alignment with national findings about low commercial value of thinning byproducts. This logic is solid, but the evidence would be stronger if it referenced specific documents, years, and sections or pages where these statements are made, and by naming at least one national-level or peer-reviewed source.

iv) There is a strong, coherent link from the specific problem to the solution design. The narrative differentiates WoodSyn from approaches that treat restoration as a disposal issue by positioning small-diameter logs as a value-creation pathway tied to real payors. The staged approach shows a strong understanding of both market and regulatory adoption sequence.





Proponent Response

Please answer this multi-part question in its entirety.

In this element, you will outline the problem your proposed solution is addressing and explain why your solution is best served to tackle this problem.

Evaluation [15 points]: Clarity on specific need/problem being addressed both at macro and project level, substantiated evidence recognizing the specific problem being solved for, and obvious connection between need/problem and proposed solution. If your Traro submission is responding to an RFP/RFI/LOI then the alignment of your project with the stated impact purpose of the solicitation will also be evaluated.

i. What is the **big picture context** (or macro-level problem) in which you are working? For example, you may be seeking to address forest loss due to climate change or water quality degradation due to wildfire damage. (Up to 1000 characters)

Northern Arizona's wildfire risk is driven by a throughput constraint in forest restoration. Treatments reduce hazardous fuels and improve resilience, but only if they are sustained at scale year after year. Restoration operations generate large volumes of small-diameter logs that must be removed to reach desired conditions and maintain a safer fire regime. In the 4FRI landscape, each treated acre produces about 25 green tons of small-diameter logs, so scaling from today's levels to landscape-scale restoration quickly becomes a supply chain problem, not a planning problem. The Greater Flagstaff Forest Partnership warns that private sector sustainability is at risk because a large share of what must be removed is low value material, and without viable utilization options the region may lose the forest industry base that took decades to rebuild. When that capacity fails, treatment pace drops, fuels accumulate, and communities remain exposed to repeated fire and post-fire costs.

ii. What is the **specific problem** or **market need** that you are attempting to address within the macro-level problem area with your proposed business model/plan? For example, you may be solving for decreased agricultural productivity due to impaired water quality due to contaminants upstream or you may be solving for a shortage of seedlings for post-wildfire reforestation. (Up to 1000 characters)

The binding constraint is the economics of small-diameter log utilization. Restoration requires removing high volumes of low-margin material, but existing markets often do not pay enough to cover harvesting, handling, and transport. Regional stakeholders warn that private sector sustainability is at risk because a large share of what must be removed is low value material, and there is an urgent need for additional utilization options. WoodSyn's market need is to create a durable, higher-value demand sink for verified restoration logs by converting them into certified wood wool cement wall systems procured through housing programs. This is the WoodSyn Value Based Forest Restoration model (VBFR): make restoration financeable by creating stable end markets for verified restoration outputs.



iii. Please provide substantiation that this specific-level problem/need is **broadly recognized** by the target market, communities, landowners, or other constituents in the project area. For example, cite data and studies indicating water quality issues or seedling shortages. Note, for any URLs provided, consider using bitly.com to shorten and please **indicate which section** of the linked document is relevant to this question. (Up to 1000 characters)

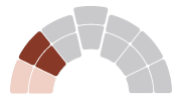
Local and regional institutions are explicit that restoration success depends on viable private utilization pathways. The Greater Flagstaff Forest Partnership / Forest Biomass Coalition Working Group states that forest management and private utilization have reduced risk across 4FRI, but that private sector sustainability is at risk because a large share of what must be removed is low value, and there is an urgent need for additional utilization options. The Eastern Arizona Counties Organization confirms scale pressure: 4FRI treated about 18,000 acres in 2025 and is positioned to scale toward 35,000 acres per year, which implies materially higher volumes of small-diameter logs that must be handled by industry. This aligns with national findings that thinning byproducts often lack commercial value and are constrained by removal and transport costs.

iv. Please explain how your proposed solution is **best positioned** as compared to others to alleviate the specific problem you are trying to solve. (Up to 1000 characters)

Many approaches treat restoration as a disposal problem. WoodSyn is positioned to treat small-diameter logs as a value-creation pathway tied to real payors. We convert restoration logs into wood wool cement building products that have durable demand, long service life, and strong fire performance, and can be purchased through established housing procurement channels. Our staged approach is built around the true adoption gate, code acceptance. Phase 1 uses certified imported WWC to deliver a 6 to 12 home cohort and produce repeatable building department submittal packages, installation guidance, and QA/QC that reduce risk for code officials, insurers, and payors. Phase 2 uses that proof to underwrite domestic manufacturing near priority fireheds, creating stable offtake for verified restoration logs and enabling VBFR-scale throughput.

v. If responding to a specific RFP/RFI/LOI etc., please confirm the alignment of your project with the impact goals of the proposal solicitation.

No



Voussoir: Practices

Reviewer Score

4.07/5.00

Reviewer Feedback

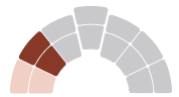
i) The response lays out a clear, concrete set of core practices: cohort demonstration delivery, repeatable assemblies/code package, constructibility analytics, performance verification/testing roadmap, and a stewarded portfolio with MRV.

ii) The response provides two solid strands of evidence: (1) peer-reviewed research showing the effectiveness of thinning plus prescribed fire in reducing wildfire severity and retaining benefits under severe fire weather; and (2) specific material fire performance test results (Flame Spread 0, Smoke Developed 0, per QAI, under ASTM E84 and E2768). It also explains why the cohort approach is a standard adoption pathway in construction, tying the practices to industry norms. Naming one or two representative studies or agencies would strengthen the response.

iii) The feasibility narrative is strong and concrete. Phase 1 avoids the high-risk “build the factory first” approach and instead uses existing EU WWC supply and Habitat’s established delivery platform, which supports practicality and near-term readiness. Costs and risk are controlled by limiting to 1-2 assemblies, taking a documentation-first approach to code and QA/QC, sequencing third-party testing, and managing supply risk via multi-vendor options and a regional logistics hub. The explanation of additionality is also clear: Phase 1 is about creating the demand signal and approval package that makes VBFR-scale utilization possible.

iv) The response does a good job aligning roles to specific activities and clearly identifies a remaining gap (portfolio manager). The track record is described mostly in functional terms rather than with concrete, past examples (e.g., prior cohorts delivered, prior code approvals, prior MRV implementations). Adding 1-2 brief, quantifiable references to past projects would strengthen this section.





Proponent Response

Please answer this multi-part question in its entirety.

In this element, you will provide detail on the practices that will be implemented in your proposed solution, including description of the practices' effectiveness, feasibility, and executability by your project team.

Evaluation [5 points]: Clarity on activities needed to effectively actuate the solution, evidence backing the effectiveness of proposed activities, practicality/readiness/affordability of implementing proposed activities, and track record of (similar) activity implementation.

i. Please provide a detailed and complete list of **key practices** (e.g., conservation, technology, services, etc.) underlying the proposed project. Briefly explain what the activities are, why they have been chosen, and what the execution of such activities will require. (Up to 1000 characters)

1. **Cohort demonstration delivery (6-12 homes):** Build with H4H Northern AZ using imported WWC components to prove constructability in U.S. field conditions and capture real sequencing, labor, and cost data. Requires vendor procurement, logistics, crew orientation, and field support.
2. **Repeatable assemblies and code package:** Limit to 1-2 standard wall/sheathing assemblies; develop details, schedules, moisture control, QA/QC, install guides, and building department submittal packages. Requires engineering inputs and disciplined documentation control.
3. **Constructability analytics:** Track labor hours, rework, waste, and schedule impacts; maintain an issue log with corrective actions that feed updated details and training.
4. **Performance verification and testing roadmap:** Document a fire-resilient enclosure pathway and define remaining test gaps needed for repeatable approvals.
5. **Stewarded portfolio and MRV:** Homes operated as managed stock with work orders and outcomes tracked by a portfolio manager.

ii. Please provide science-based evidence in support of the **effectiveness** of the activities listed above. Elaborate on how this evidence supports your choice to pursue these practices/methods. This can include, but is not limited to, peer reviewed research, controlled testing, pilots and scaled use. (Up to 1000 characters)

Proven practices: Fuel treatments and restoration are supported by peer-reviewed research showing thinning plus prescribed burning reduces subsequent wildfire severity and can remain effective under severe fire weather.

Material fire performance evidence: WoodSyn's cemented wood wool panels achieved Flame Spread 0 and Smoke Developed 0 in QAI test reports for 1-inch through 4-inch panels, under the referenced ASTM E84 (extended) and ASTM E2768 (30-minute tunnel) framework.

Why this supports our method: The cohort approach is a standard adoption pathway in construction: prove constructability, translate results into repeatable assemblies and submittals, and reduce risk for code officials, insurers, and payors. Phase 1 is designed to generate this approval-ready package, not just build a one-off.

iii. Please elaborate on the **feasibility** of your proposed project activities. We are looking for rationale that each of the proposed activities are practical, affordable, ready, applicable, and additional to positively impact your stated problem area. (Up to 1000 characters)

Feasibility is high because the plan is staged and uses proven tools and institutions. Phase 1 does not depend on building a factory first: we use existing EU WWC supply and Habitat's delivery platform to execute a modest, repeatable cohort and capture real constructability, cost, and performance data. Cost/risk are controlled by limiting to 1-2 assemblies, using a documentation-first approach (Code official/EOR submittals, QA/QC, install guides), and sequencing third-party testing so approvals become repeatable rather than bespoke. Supply risk is managed through multi-vendor options and buffering via a regional restoration logistics hub.

Additionality: Phase 1 does not claim hazardous-fuels utilization; it creates the demand signal and approval package that unlock domestic manufacturing, which then enables VBFR-scale utilization of verified restoration fiber near priority firehedges.

iv. What is your team's level of **experience** specifically with the stated project activities? Please be specific in detailing the alignment of your team's relevant track record with the needs for the proposed project activities.

Please note that under the Partners Archway element, you will have the opportunity to showcase your team's overall credentials. This question asks for experience with the proposed set of activities specifically. (Up to 1000 characters)

WoodSyn's team is aligned to the specific activity stack, not just the mission. WoodSyn is accountable for procurement/logistics, assembly definition, QA/QC, installer documentation, and field support, which are the core execution practices in Phase 1. Ben Williams leads operations disciplines needed for cohort execution, issue closure, and converting field learnings into repeatable SOPs. Sean Gunderson leads strategic partnerships and the commercialization pathway, including early code engagement and the documentation-first approach that underpins repeatable approvals. Quantified Ventures supports governance and MRV discipline required to package results for payors and investors. Habitat for Humanity Northern Arizona provides a proven build platform and consistent data capture across the cohort. Remaining gap: portfolio manager selection is in progress, with duties already scoped.





Voussoir: Participation / Co-Creation

Reviewer Score **4.07/5.00**

Reviewer Feedback

i) The response clearly identifies a rich and relevant set of external stakeholders: Tribal governments, housing authorities, residents, H4H Northern Arizona, a nonprofit housing portfolio manager, a regional restoration logistics hub plus contractors/haulers, code officials/building departments/EORs/test partners, and builders/trades and insurers. This gives a well-structured landscape of “who matters and why”.

ii) The engagement description is thoughtful and shows that the project has been structured around key implementers and adoption gates. H4H Northern Arizona is framed as a core delivery platform with engagement focused on repeatable assemblies and field data capture. Engagement with code officials/building departments and EORs is clearly organized around a documentation-first pathway and early surfacing of requirements, which is a practical way to de-risk approvals. Tribal consent and community-defined outcomes are explicitly built into the design, and a dedicated portfolio manager function and a regional restoration logistics hub concept are incorporated up front.

iii) The response gives a differentiated picture of buy-in and outlines concrete steps being taken to earn greater buy-in, such as limiting to 1-2 assemblies, publishing building-department-ready packages, running install clinics, and using cohort and work-order data to reduce perceived risk. It would strengthen the response to briefly describe how Tribal housing partners have been engaged so far and what specific co-design or decision points they have participated in.

iv) The feedback and grievance mechanisms are well thought out and operationally detailed, especially the field issue log, post-build reviews, early engagement with code officials, and the resident work-order system with escalation and root-cause tagging. One important gap is that the portfolio manager—who is described as central to the resident grievance loop and communication with Tribal partners—has not yet been identified, and the response does not specify who will carry these responsibilities in the interim. It would strengthen this section to clarify interim ownership for grievance handling and Tribal communication, briefly describe the governance structure with Tribal partners, and note how residents will be informed about their feedback channels and rights.





Proponent Response

Please answer this multi-part question in its entirety.

In this element, you will describe the steps you have taken to achieve stakeholder buy-in for key external stakeholders that are **critical to the successful implementation of the proposed project**. Your response should demonstrate your knowledge of relevant external stakeholder groups and how your business or project design has, or plans to, engage them and respond to their concerns before and throughout the life of the project.

Evaluation [5 points]: Clarity on relevant external stakeholders, clear description of prioritized stakeholder engagement undertaken, evidence of initial buy-in from key external stakeholders for the proposed solution, and clear mechanism in place for stakeholder feedback and ongoing grievances.

i. Who are the **relevant external stakeholders** that will directly engage in the project? Please provide a landscape of the critical groups that will be responsible for the project's implementation success. This could include stakeholder groups such as landowners, local community groups, technical assistance providers, policymakers, etc. Include a brief explanation of how the project's success is in part dependent on each group. (Up to 1000 characters)

Tribal governments, housing authorities, and residents: consent, site selection, community-defined success metrics, workforce participation, and long-term replication pipeline. H4H Northern Arizona: delivery platform for the cohort, build sequencing discipline, and constructability data capture in real builds. Nonprofit housing portfolio manager (TBD): ownership or stewardship, maintenance and reserves planning, work-order tracking, resident feedback and grievance routing, and long-run performance reporting. Regional restoration logistics hub and restoration contractors/haulers: reliable supply chain for verified small-diameter logs, sorting/spec compliance, chain-of-custody, buffering and dispatch. Code officials and building departments, plus EORs and third-party test partners: define approval requirements, review submittals, and enable repeatable acceptance. Builders/trades and insurers: ensure correct installation and provide the risk acceptance needed for replication at scale.

ii. Please describe the steps you have taken to appropriately and **actively engage** key stakeholders that are critical to the successful implementation of the proposed project. (Up to 1000 characters)

We structured Phase 1 around implementers and adoption gates. With H4H Northern AZ, we are aligning the cohort around repeatable assemblies and field data capture (sequencing, labor, rework, and issues) so the project produces decision-grade constructability evidence, not just a build. We have framed engagement with code officials/building departments and EORs around a documentation-first pathway: a limited set of assemblies, complete submittal packages, and a sequenced testing roadmap so requirements surface early rather than at the end. We built the project design around Tribal consent and community-defined outcomes and scoped a dedicated portfolio manager function to ensure homes are stewarded stock with measurable O&M outcomes. We also incorporated the regional restoration logistics hub concept to standardize chain-of-custody, feedstock specs, and buffering for reliable execution.



iii. Describe the **level of buy-in achieved** from each key stakeholder group to-date. This can also be framed as the degree of co-creation of the solution with those stakeholders. In addition to highlighting your project's successes in stakeholder engagement to date, do not hesitate to be candid about the stakeholder groups from which you have received pushback. For any stakeholder groups that have resisted or hesitated, please explain what actions you are taking to achieve greater buy-in. (Up to 1000 characters)

Strong buy-in: H4H Northern AZ is aligned as the execution platform for a defined cohort build, and the work is co-created around their real constraints: repeatability, sequencing, inspection readiness, and cost capture. Emerging buy-in: Tribal housing partners are engaged on siting, governance, and success metrics, with emphasis on stewarded affordability and durability outcomes. Appropriately cautious: code officials/building departments, insurers, and some builders are hesitant until they see complete submittals and repeatable approval logic. Our response is explicit: limit to 1-2 assemblies, publish building-department-ready packages, run install clinics, and use cohort data plus work-order outcomes to reduce perceived risk. Gap: the portfolio manager is not yet named; we have defined the role and are in active diligence to select a steward with affordable-housing O&M systems and reporting capacity.

iv. Since these stakeholders are essential in the adoption of the proposed activities or essential to project implementation, it is important that the project design considers their needs and provides a **continuous feedback and grievance mechanism(s)**. Explain the steps the project has taken to date to build an ongoing feedback mechanism and how the project plans to incorporate stakeholder feedback throughout its lifetime. (Up to 1000 characters)

Feedback is built into how the project operates. During cohort builds, we maintain a field issue log with corrective actions, then run structured post-build reviews to update details, QA/QC, and training for the next unit. For approvals, we use early check-ins with code officials/building departments and EORs to surface concerns before formal submittal and prevent late-stage surprises. For residents, the portfolio manager will run the grievance loop through work-order ticketing, response-time targets, escalation paths, and root-cause tagging (including enclosure-related issues). Public reporting is de-identified and aggregated by default, and any community-facing summaries are reviewed through the governance process with Tribal partners. Quarterly governance reviews convert recurring issues into updated specs, training, and documentation through a controlled change log.





Keystone: Partners

Reviewer Score

8.76/10.00

Reviewer Feedback

i) The response identifies six core roles that are clearly relevant to the plan: project lead/partnerships, COO/operations, finance/MRV/governance, demonstration delivery, portfolio management, and Tribal housing/governance. It also explicitly notes additional gap roles (testing/certification/code pathway lead, logistics hub and contractor/hauler capacity), which shows good awareness of what is needed beyond the named six.

ii) The roles for WoodSyn (Sean Gunderson and Ben Williams), Quantified Ventures, and Habitat for Humanity Northern Arizona are well covered with clearly named organizations and individuals, along with their responsibilities. The portfolio manager role is defined as “Nonprofit Housing Portfolio Manager (TBD)” with a clear target profile. For “Tribal housing partners / Indigenous community stakeholders,” the response identifies the role category but does not name specific Nations, housing authorities, organizations, or individual leads.

iii) The response gestures at alignment and commitment for most roles. Listing prior collaborations (e.g., past projects with H4H NAZ or QV) would demonstrate concrete commitment.

iv) The response provides solid, role-specific evidence of experience and capabilities for the core team members, including years of relevant work and organizational track records.





Proponent Response

Please answer this multi-part question in its entirety.

In this element, you will have the opportunity to describe the credentials of the proposing team to showcase the ability to deliver on the proposed solution with strong team member synergies.

Evaluation [10 points]: Identification of all people, roles, and skills necessary to implement the solution, identification of specific team members (internal or external) to fill each role, evidence of alignment and commitment amongst team members, and evidence of depth of experience and capabilities for each team member in their respective role.

Please identify the six most important roles necessary for the successful implementation of the plan. For each role, identify key team members and/or partners responsible for filling that responsibility.

For each role, we ask that you use the below format example that includes: 1. Name 1. Company 1. Role/duties on the project 1. Skills and pertinent experience (include number of years in this domain) 1. Evidence of alignment and commitment amongst team members and with the set of practices detailed in 3.Voussoir: Practices

FORMAT EXAMPLE:

- Role 1: James Smith, PNW Timber Incorporated, CEO. Smith is project lead and is responsible for overall project management and fundraising. Smith has over 15 years of experience in senior project management roles and raising capital (largest raise was \$620 million for a TIMO) in similar organizations with key strengths in strategy and executions. Smith has brought 3 key personnel from previous organizations to support the execution of the proposed solution.
- Role 2: Bill Baker, Greens Infrastructure LLC, General Manager responsible for overseeing mass timber mill construction. Has been engaged for pre-construction and is expected to sign a GMP. GI has built 8 similar mass timber projects and are well-established in the sector with 20 years of industry experience in mill construction. GI has partnered with ABC Inc on 4 other similar projects.
- Role 3: ... etc.

Team members may be either individuals or named as companies/organizations. Please only indicate the six most important roles / role categories that are needed to successfully deploy the proposed solution. Key roles can be filled by people in the proponent organization or by partner organizations identified as project team members.

Please be candid about any blind spots or misalignment in the current project team construction. If you do not yet have a perfect match for a particular role, we would like to hear about the steps you are taking to fill this gap (Up to 3000 characters)

Role 1: Sean Gunderson, WoodSyn, Project Lead / Strategic Partnerships & Commercialization. Leads program direction, stakeholder alignment, partner MOUs, payor/offtaker development, and go/no-go sequencing (demo → documentation → domestic scale). 10+ yrs building strategic alliances across entrepreneurial tech ventures; deep working knowledge of WWC history, performance, and WUI/affordable-housing use cases. Alignment: WoodSyn owns procurement/logistics, assembly selection, QA/QC, installer docs, field support, and scale roadmap—coordinated through partners.

Role 2: Ben Williams, WoodSyn, COO / Execution & Operations Lead. Owns day-to-day execution, schedule/risk, vendor coordination, field readiness, and converting lessons learned into repeatable SOPs. 15+ yrs operations/program leadership in complex environments. Alignment: drives constructability analytics, issue closure, and repeatable documentation.

Role 3: Quantified Ventures (QV), Partner, Finance/MRV/Governance Lead. TRARO-ready packaging, MRV framework, investor/offtaker positioning, capital-stack design, governance/reporting. 10+ yrs org experience in innovative finance + measurement. Alignment: directly supports MRV and scale capitalization.

Role 4: H4H Northern Arizona, Partner, Demonstration Delivery Platform. Executes cohort builds, validates sequencing, captures constructability/cost data, community interface. Decades delivering affordable housing. Alignment: core to demo execution and constructability learning.

Role 5: Nonprofit Housing Portfolio Manager (TBD), Partner, Long-term Stewardship + Outcomes Tracking. Oversees PM, compliance reporting (as applicable), reserves/capital planning, insurance/risk, and work-order/outcome data. 10+ yrs target profile in affordable housing ops. Alignment: ensures homes are managed stock with measurable O&M and replication SOPs.

Role 6: Tribal housing partners / Indigenous community stakeholders, Partner, Governance, Consent, Local Implementation. Site selection, community-defined success metrics, workforce participation, pipeline alignment. Deep place-based experience. Alignment: essential to co-creation and long-run adoption.

Gaps + actions:

Portfolio Manager (TBD). Role is defined; diligence underway to select a steward with proven O&M ticketing, reporting capacity, and fit for Tribal/rural contexts.

Testing/certification and code pathway lead not yet contracted. Scope is defined to manage the sequenced test plan, produce building-department-ready submittal packages for selected assemblies, and manage evaluation-report pathways as needed. This is a priority action because repeatable code acceptance is the adoption gate.

Regional restoration logistics hub and contractor/hauler capacity are in progress. We have an initial provider relationship in place and are diversifying providers via additional MOUs/MSAs that define specs, chain-of-custody, and buffering to ensure reliable small-diameter log supply as the model scales.





Voussoir: Precision / Data & Measurement

Reviewer Score **5.00/5.00**

Reviewer Feedback

i) The response identifies a focused, relevant set of outcome metrics and ties them clearly to the core problem of restoration throughput, carbon storage, housing resilience, and local economic benefits

ii) The response presents a clear and concrete data plan for each metric, specifying sources and how they connect back to the metrics. It also explains how the data will be collected and used. The section explicitly addresses respectful collection through Tribal data MOUs, opt-ins, de-identification, and community review, which is important for context-appropriate practice.

iii) The response provides solid evidence that the metrics and methods rest on widely accepted practices. It grounds restoration metrics in standard agency/land-manager reporting (fuel-treatment acres/volumes, geospatial treatment layers, treatment-wildfire intersection analyses) and ties embodied-carbon metrics to established LCA/EPD standards (ISO 14040/44, ISO 14025, EN 15804 and related PCRs).

iv) The reporting plan is specific about format, frequency, roles, and resourcing. It commits to quarterly partner dashboards and an annual public impact report, and clearly assigns responsibilities across WoodSyn, the portfolio manager, land/logistics partners, and a third-party reviewer for LCA/EPD work.





Proponent Response

Please answer this multi-part question in its entirety.

This element aims to gain clarity on the key performance metrics your proposed solution will employ, what data is required to measure those metrics, and the resources the project has allocated to accurately monitoring and reporting its key performance metrics.

Evaluation [5 points]: Clarity on key performance (impact) metrics relevant to project performance, clarity on data required to evaluate the metrics and a measurement plan to gather the data, evidence of scientific basis/market adoptions for measurement analysis, reporting medium and frequency, and commitment to allocate necessary resources to measure and report.

i. Describe the **key impact metrics** you will use to measure economic, environmental, and social outcomes from this project. We are not looking for a “laundry list” of impact metrics here; rather, this question is seeking to confirm that you have identified an appropriate set of key metrics given the stated problem area and proposed solution. These metrics should be focused on the impact outcomes, not internal business / financial metrics. (Up to 1000 characters)

We will track the following set of outcome metrics tied to the core problem.

Forest restoration throughput: acres treated that generate small-diameter restoration logs, and tons of small-diameter logs removed and delivered (verified by treatment type and geography).

Carbon outcome: net tCO₂ stored in long-life WWC products, reported per cohort and at plant scale, with clear boundaries; at full operating capacity we model approximately 58,250 tCO₂ per year in products (biogenic storage plus binder mineralization).

Housing resilience: number of affordable, fire-resilient homes delivered and maintained as stewarded stock, plus repeatable enclosure compliance (inspection checklist completion) and durability signals (callback frequency). **Community economics:** local jobs and training hours tied to restoration, logistics, manufacturing, and installation.

ii. Please detail the necessary **data sources** for the key impact metrics listed above and tell us your plan for measuring/collecting this data. Describe how this data will be used to support your key performance metrics and how the collection of data will be executed in a way that is respectful of stakeholder and contextual surroundings. (Up to 1000 characters)

Acres/tons treated: Contracts + prescriptions + GIS polygons + certified scale tickets (linked by chain-of-custody ID) to verify restoration throughput and feedstock origin.

Fiber→product: Inbound weights + moisture tests; batch/yield & scrap logs; outbound bills of lading to quantify conversion rates, product volume, and traceability from load to finished batches.

CO₂: Third-party EPD/LCA factors applied to measured product volumes (updated if process/formulation changes) to report tCO₂ stored/avoided per cohort and at scale.

Homes/O&M: Portfolio manager unit logs (starts/completions, occupancy), tagged work orders (incl. “enclosure-related”), time-to-repair, and reserves/capex events to measure durability, reliability, and household stability.

Respectful collection: Tribal data MOUs; resident opt-in for any utility/insurance or survey data; de-identified/aggregated reporting by default; and public summaries released only after community review.



iii. Please provide evidence that the **key impact metrics** and data collection methods identified in Questions i and ii are scientifically valid and accepted by relevant markets or institutions. This may include peer-reviewed studies, approved methodologies, verified pilots, registry standards, or regulatory frameworks that support the use of these metrics for decision-making and comparison over time. (Up to 1000 characters)

Fuel-treatment acres/volumes and geospatial treatment layers are standard reporting units used by agencies/land managers and are commonly used for treatment effectiveness analyses (e.g., wildfire-treatment intersection monitoring). <https://tinyurl.com/3t6333m4>

Embodied carbon accounting relies on accepted LCA/EPD standards—ISO 14040/44 and Type III EPD frameworks (ISO 14025 / EN 15804 with PCRs)—to support comparison over time and across products.

<https://tinyurl.com/mpu3rbdx>

Affordable-housing delivery and stewardship metrics (unit status, eligibility/compliance reporting where applicable, work orders, reserves planning, response times) mirror standard asset-management practice used by housing institutions to track durability and household stability.

<https://tinyurl.com/y44kt4hz>

iv. Please describe your intended **format and frequency** for reporting on the identified **key impact metrics**, as well as the entity responsible for reporting. Elaborate on the resources, tools, and personnel you plan to allocate to tracking the key metrics proposed. Please also include how you will update the project's key performance metrics, if doing so becomes necessary at some point in the project's lifetime. (Up to 1000 characters)

Reporting: Quarterly partner dashboard (PDF + shared spreadsheet) covering acres/tons, conversion yields, homes delivered/occupied, O&M/work-order trends, issues/resolutions; annual public impact report with community-approved aggregated summaries and updated LCA/EPD assumptions.

Responsibility: WoodSyn = impact reporting lead; portfolio manager = housing/O&M metrics; land/logistics partners = verified feedstock/GIS; third-party reviewer = LCA/EPD factors.

Resources/Tools: 0.5–1.0 FTE Impact & Data Manager, standardized chain-of-custody logs, scale ticket + moisture QA, GIS, simple ticketing/work-order tagging, annual third-party review.

Updates: Controlled “metrics change log” approved in quarterly governance; back-cast where feasible to preserve comparability.





Voussoir: Policy Alignment

Reviewer Score **4.69/5.00**

Reviewer Feedback

i) The response clearly states that the proposed activities are allowable under current law and then names the main legal/policy headwinds: restoration pace and supply certainty on public lands (NEPA and objections/litigation), industrial siting/permitting, building-product acceptance under IBC/IRC, and Tribal housing compliance under NAHASDA and 2 CFR 200.

ii) The response demonstrates a strong and well-informed understanding of the legal and regulatory frameworks relevant to the project. Rather than relying on general statements, the proponent references specific governing processes and statutes, including NEPA review pathways, the USFS objection process under 36 CFR 218, ICC-ES evaluation pathways, NAHASDA implementation regulations, and federal Uniform Guidance requirements under 2 CFR Part 200. This level of specificity indicates that the team has undertaken substantive analysis of the policy and compliance environment surrounding public lands feedstock sourcing, housing product approval, and tribal funding administration.

While the response does not cite specific legal opinions or previously approved pilot projects, it nevertheless provides credible evidence of policy literacy and regulatory preparedness grounded in established frameworks and standards.

iii) The response presents a thoughtful and well-structured strategy for mitigating the identified legal, policy, and regulatory risks. The approach to feedstock and NEPA-related delays is particularly strong, combining supply diversification, staged procurement, buffer inventory management, and flexible fiber specifications to reduce dependence on any single approval pathway or supplier. This demonstrates a practical understanding of how public lands processes and litigation risks can affect project timelines.

The permitting and siting strategy is also credible and appropriately proactive. The use of pre-application meetings, conservative facility design, and operational SOPs aimed at dust, stormwater, fire safety, and handling compliance reflects an understanding of common permitting concerns and enforcement risks.

The response is especially strong in addressing code acceptance challenges. The decision





Proponent Response

Please answer this multi-part question in its entirety.

This element aims to gain a complete, detailed understanding of the policy and regulatory headwinds that might impact this project, as well as your project's strategy to mitigate the risks of these headwinds should they materialize.

Evaluation [5 points]: Confirmation that the proposed solution is allowed under current policy/regulatory environment, evidence of the investigation/knowledge of potential headwinds, identified plan to mitigate/manage potential policy/regulatory obstacles, track record of successful activity implementation in similar political/regulatory environments.

i. Please confirm that the proposed solution is allowed under the existing legal and regulatory environment AND identify the **key legal, policy, or regulatory hurdles** (anticipated or current) that need to be overcome to ensure project success. (Up to 1000 characters)

Yes—the proposed activities are allowable under current law: delivery of affordable housing on Tribal/rural sites; procurement/import of WWC components and later domestic manufacturing where permitted; and restoration contracting/biomass utilization where authorized by land managers/owners.

Key hurdles are mainly timing, approvals, and compliance:

- (1) restoration pace/supply certainty on public lands (NEPA review level, objections/litigation);
- (2) industrial siting/permitting (zoning/land use, air/dust/noise, stormwater, fire-code storage/operations);
- (3) building-product acceptance (IBC/IRC alternative materials pathways, third-party fire/structural testing, ICC-ES ESR, AHJ/EOR requirements);
- (4) Tribal housing compliance (NAHASDA + 2 CFR 200 procurement/reporting, inspections, closeout).

ii. Please **substantiate** the consideration of legal, policy, or regulatory hurdles listed above. This may include research-based substantiation, legal opinions gathered, and regulatory sign-off on existing pilots or scaled projects. (Up to 1000 characters)

WoodSyn grounded our hurdle analysis in the governing frameworks that control schedule, approvals, and compliance. Public-lands feedstock pace is gated by NEPA, which has defined review levels (CATEX, EA/FONSI, EIS) that affect timelines and risk, and by the USFS predecisional "objection" process for qualifying projects (36 CFR 218) that can delay decisions even after environmental analysis. Product acceptance is commonly normalized through third-party evaluations; ICC-ES describes ESRs as technical evaluations verifying compliance with IBC/IRC and documenting conditions of use and installation requirements—exactly the pathway we are planning. Tribal housing delivery is governed under NAHASDA implementing regulations (24 CFR Part 1000), and award management/procurement/audit obligations are set by 2 CFR Part 200 (Uniform Guidance)—both of which shape reporting, procurement standards, and audit readiness.

iii. For the legal, policy, and regulatory headwinds listed above, explain in detail how you plan to **mitigate and manage** those barriers should they come to pass. (Up to 1000 characters)

Feedstock/NEPA delays: Avoid single-source dependence by diversifying supply (Tribal/State/County/private where available), staging procurement, and holding buffer inventory through a regional restoration logistics hub(sorting/storage/moisture control) so builds aren't halted by seasonal windows, objections, or litigation. Use flexible fiber specs and multi-supplier options.

Permitting/siting: Conduct pre-application meetings; design conservatively for dust/noise, stormwater, and fire-code compliant storage; implement SOPs/QA for safe handling to prevent enforcement surprises.

Code acceptance: Limit to 1-2 repeatable assemblies; sequence third-party fire/structural tests; deliver AHJ/EOR-ready submittal packs (details, fastening, moisture, QA/QC); pursue ICC-ES ESR to standardize approvals.

Housing compliance: Portfolio manager executes NAHASDA/2 CFR 200 procurement, inspections, and audit-ready reporting; quarterly governance reviews track risks and trigger corrective actions.

iv. What is the level of experience of the project's team members in navigating such policy or regulatory hurdles? Please reference specific team members in your answer and past examples to improve your response. (Up to 1000 characters)

WoodSyn's team is structured to operate in compliance-heavy, multi-stakeholder environments.

Ben Williams (COO) brings operations leadership in complex settings and experience with FEMA planning processes and disciplined documentation, directly applicable to permitting schedules, vendor controls, and audit-ready execution.

Sean Gunderson (CEO) leads strategic partnerships and has advanced early engagement with code officials and building departments, using a documentation-first pathway based on sequenced testing, complete submittals, and repeatable approval packages aligned to typical adoption requirements.

Quantified Ventures adds governance and MRV discipline and capital-stack structuring suited to regulated, multi-counterparty projects.

Habitat for Humanity Northern Arizona provides a proven delivery platform with repeatable field processes and consistent data capture that strengthens approval packages and funder reporting.





Springer: Payors

Reviewer Score **12.19/15.00**

Reviewer Feedback

i) The response is clear about the end products: two branded WWC building products (OptimWall large wall elements / wall system packages and OptimBoard fire-resistant sheathing/continuous insulation panels) plus a verified restoration-log supply pathway that ties logs to finished batches.

ii) The target payor segments are well specified and appropriate. The market context is quantified using WUI housing data (~44M homes, 32% of U.S. housing) and adjacent category sizes (ICF and U.S. insulation markets), which supports the logic that this is a large, relevant addressable space.

iii) The go-to-market strategy is detailed and emphasizes documented performance and repeatability. It starts with payors who value lifecycle outcomes, and uses a stewarded portfolio to generate measured O&M and durability data that payors can defend. It lays out concrete tactics: limiting to 1-2 assemblies, producing code-ready submittals, tracking constructability metrics in a cohort, publishing lessons learned, running spec-in efforts with architects and municipal teams, and building toward domestic manufacturing once demand and approvals are validated. This shows a strong understanding of how building products actually gain adoption. While the strategy is robust, there is limited evidence yet of actual market testing, pricing traction, or specific competitive positioning against existing systems like ICFs or other fire-resilient envelopes, even though those markets are cited.

iv) The response explains ability to pay for each segment and describes early-stage willingness (strong unit economics, active partner alignment for a first cohort, and a target pipeline of 10-30 initial units and 50-150 units over 2-3 years). However, the question asks who has committed an intent to purchase and in what form (letters of interest, term sheets, purchase orders, contracts, etc.), and on that point the response remains prospective: it mentions converting interest into conditional LOIs but does not identify specific payors, instruments, or signed commitments.





Proponent Response

Please answer this multi-part question in its entirety.

This section aims to identify the ability to commercialize the end products from the proposed solution to key Payors. Note these willing and able Payors should be end customers and NOT an intermediary financier or reimbursement agency. The targeted Payors groups could include, for example, utilities, farmers, insurance corporations, cities or municipalities, etc. – the more specific the better for this response!

Evaluation [15 points]: Clarity on the end "product," clarity on the end "payors," solid go-to-market plan to effectively sell the identified product(s), and evidence and level of commitment to purchase the specific product(s) generated from the proposed solution by identified willing and able Payors.

i. Describe the specific **key end products** (outcomes, goods, services, etc.) from the proposed business/project that are/will be sold into a market? (Up to 500 characters)

WWC building products and wall systems for fire-resilient, durable construction:

- (1) OptimWall™ large wall elements / wall system packages;
- (2) OptimBoard™ fire-resistant sheathing/continuous insulation panels; plus
- (3) Also included is a verified restoration-log supply pathway (specs + chain-of-custody documentation) that connects small-diameter logs from restoration to finished product batches.

ii. Which **market segment** of Payors are you targeting AND what is the size of the economic market potential for the proposed **key end products**? (Up to 1000 characters)

- (1) Tribal TDHEs and Tribal housing authorities, and the nonprofit housing portfolio manager that owns or stewards units (purchasing wall systems for new and rehab homes).
- (2) Habitat affiliates and other affordable-housing developers in rural/WUI communities (project-by-project procurement). (3) Counties/municipalities and public facility owners in high wildfire-risk areas (workforce housing, clinics, community buildings).
- (4) Production builders and multifamily developers in WUI markets once code documentation is repeatable.

Market potential: Demand is structurally large because the WUI now contains ~44M homes (32% of U.S. housing) and added 2.6M new homes (2010–2020)—a growing addressable segment for fire-resilient envelopes. Category spend is significant: the global ICF market was estimated at ~\$949M in 2024 (North America ~36.6% share). The U.S. insulation market is estimated at ~\$13.5B in 2024 (adjacent spend for continuous insulation value).



iii. Describe your **go-to-market strategy** to effectively bring the described **key end products** to the identified segments of Payors (Up to 2000 characters)

Documented performance first, then scale adoption.

Anchor cohort with payors who value lifecycle outcomes: Launch with Tribal/portfolio-managed affordable housing where durability, operating cost, and fire resilience matter. A stewarded portfolio (not one-off pilots) enables consistent O&M tracking, resident feedback, and proof of durability—turning “performance claims” into measured outcomes that payors can defend.

Package adoption for repeatability: Limit to 1–2 standard assemblies and produce code official/EOR-ready submittals (details, fastening schedules, moisture control, QA/QC, inspection checklists) plus clear scopes of work. This converts early interest into procurement-eligible specs and reduces friction for builders, inspectors, and insurers.

De-risk with measured constructability: Execute a cohort build with time/labor/rework tracking, waste rates, and field issue closure. Publish “as-built” lessons learned, revised details, and install sequences so each build gets faster and more predictable—exactly what payors and builders need to commit at volume.

Spec-in engine: Target A2 architects, Habitat affiliates, and municipal facility teams via lunch-and-learns, design guides, and showcase projects. Provide early-stage technical support (thermal/moisture detailing, code narrative, alternates, and bid-ready takeoffs) so the product is specified correctly and priced competitively.

Channel plan: Direct sales and hands-on support for anchor cohorts; then regional reps/distributors for OptimBoard and a trained installer network for system consistency, warranty control, and reduced callback risk.

Scale to domestic manufacturing + VBFR: Use validated demand, RTL economics, and approval packages to underwrite a domestic plant near priority firehedges. As capacity ramps, shift from imported inputs toward verified restoration fiber—creating a stable demand sink (VBFR) and maintaining a pipeline of LOIs/commitments sized to plant throughput underwriting.

iv. Describe the willingness and ability to pay for the ultimate **key end products** from your proposed solution by your **targeted payors**. In other words, who has **committed an intent to purchase** your key end product(s) and in what form? Be sure to describe the scale (#, \$, years, volume, etc.) and degree (letter of interest, term sheet, purchase order, contract, etc.) of commitment. (Up to 1000 characters)

Ability to pay: Tribal housing authorities/TDHEs and nonprofit affordable-housing owners typically procure through capital programs (e.g., NAHASDA/IHBC & complementary sources) and can pay for proven, code-approvable systems; municipalities fund facilities/workforce housing through CIP budgets and grants; builders/developers pay when assemblies reduce risk & cycle time.

Willingness to pay: Independent RTL analysis indicates WWC large wall elements have the highest EBITDA return to fiber (~\$416/BDT) but identifies U.S. code acceptance as the main hurdle; consistent with why early buyers are contingent on documentation and approvals.

Current commitment status (candid): We have active partner alignment for a first cohort (6–12 homes) & are converting interest into conditional LOIs tied to (a) defined assemblies/submittals & (b) sequenced testing/results. Near-term target: 1–3 pilot cohorts (~10–30 units) → multi-year pipeline (~50–150 units over 2–3 years) once approvals are repeatable.





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For questions, comments, or additional information
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