

Responsible Sourcing Strategy

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[Running Tide](#) is an ocean health company. Ocean health is critical to planetary and human health — but ocean health is in rapid and accelerating decline. At Running Tide, our mission is to restore ocean health and productivity, rebalance the carbon cycle, decarbonize global supply chains, and revitalize coastal communities. We do this by developing integrated software and hardware systems, designing cutting-edge monitoring and measurement capabilities, and deploying comprehensive nature-based interventions, including solutions for open ocean carbon removal and biodiversity enhancement.

Running Tide's primary operations are currently based in two fishing communities: Portland, Maine and Akranes, Iceland. These communities rely heavily on natural resource management and are directly affected by the climate crisis. By working in these locations, we aim to gain valuable insights and knowledge that can be applied to other communities facing similar challenges and dynamics.

This document provides an overview of Running Tide's sourcing strategy and outlines the considerations that govern our selection of materials and suppliers. These measures are implemented to guarantee that we successfully obtain the intended climatic, ecological, and socioeconomic objectives of our carbon removal operations. Our strategy is outlined as follows:

1. **Context** – the need for positive interventions to restore ocean health
2. **Our Sourcing Approach** – the key tenets guiding our material procurement and use
3. **Establishing Negative Carbon Supply Chains** – ensuring our operations and supply chains are net negative carbon
4. **Net Positive Forest Impact** – ensuring our sourcing promotes healthy and resilient forests

5. **Net Positive Ocean Impact** – how we proactively mitigate environmental and ecological risks to the ocean
6. **Net Positive Community Impact** – implementing safeguards and evaluating socioeconomic benefits for communities within our supply chain
7. **Material and Supplier Vetting** – codifying our values and maintaining compliance
8. **Appendix:** Running Tide's Governance Framework

1. Context

The need for the rapid development of large-scale carbon removal is now mainstream science, as documented by the Intergovernmental Panel on Climate Change (IPCC) in their [Sixth Assessment Report](#). All reasonable scenarios that limit global warming to 1.5°C — the globally accepted limit beyond which the planet is likely to face dire and unpredictable effects — require large-scale carbon removal to the effect of hundreds to thousands of gigatons by the end of the 21st century, along with the immediate reduction of CO₂ emissions across all economic sectors.

The health of the ocean has been in rapid decline due to the warming, acidification, and deoxygenation caused by the absorption of anthropogenic CO₂. This decline threatens coastal communities and food security. It puts the natural processes that regulate our climate systems at extreme risk of collapse. Without positive interventions like ocean-based carbon removal, the capacity of the ocean to sequester and store atmospheric CO₂ will likely continue to diminish, accelerating the increase in atmospheric CO₂ and the resulting acidification of surface seawater.

This “negative baseline” of rapidly declining ocean health provides critical context when considering ocean climate solutions, as there is no solely conservation-focused strategy that provides a realistic pathway towards meaningfully maintaining or improving ocean health at a global scale. While conservation and preservation of at-risk areas is a critical component of preventing further damage and maintaining a healthy, productive, and biodiverse ocean, taking positive action to restore degraded ecosystems, reverse acidification, and remove excess carbon is necessary to counter the irreversible changes faced by marine ecosystems.

Simply put, there is no path to effectively combating the climate crisis that does not include taking positive action in the ocean to address acidification, warming, and biodiversity loss.

As a leading practitioner in the rapidly growing field of carbon removal – and one of the few companies in the space today successfully conducting field trials – Running Tide feels a responsibility to set clear standards for responsible action and ethical decision making among ocean actors and carbon removal practitioners more

broadly, and to ensure appropriate consideration of the environmental, ecological, and social implications of our activities - both positive and negative.

2. Our Sourcing Approach

The success of any carbon removal approach is contingent on the meticulous sourcing of the materials used. Done correctly, effective sourcing can align incentives to promote sustainable land management and improve biodiversity, climate, and community benefits. However, the past has shown us that the large-scale sourcing of natural materials – even when utilized for climate-friendly purposes – can result in adverse consequences such as the degradation of ecosystems, biodiversity loss, community displacement, and public health issues, amongst other challenges. For any carbon removal approach to work at scale, especially those reliant on traditionally-mined alkaline materials or biomass, incentives must be aligned from the start, and a project's direct and indirect impact on material production and land management must be modeled, tracked, and measured.

Running Tide commits to providing transparency in our sourcing, reporting annually and publicly on the raw materials we use. Our decision-making process is guided by the fundamental principle of creating measurable positive impacts on the climate, biodiversity, and communities, both through the materials we research and deploy, as well as the suppliers we choose to partner with.

Optimizing climate benefit

It is our belief that a carbon removal system, especially one that intervenes in the natural environment and relies on sourcing natural materials, should seek to achieve the highest climatic benefit while minimizing any adverse localized impacts. The system should be designed to have a net positive impact, inclusive of benefits to the climate, ecosystem, and affected communities; it should be designed to be deployed safely, with appropriate safeguard mechanisms and controls in place; and, while starting small, it should be designed for scalability, such that it has the potential to scale to the size of the problem.

Utilization of natural materials

Running Tide's carbon removal approach utilizes readily available natural materials that, where possible, are non-exogenous to the ocean, including terrestrial

biomass, alkaline minerals, and macroalgae. This combination of materials produces a system that is inherently adaptable, enabling it to effectively respond to the dynamic conditions found within the ocean environment. Additionally, the system is designed to leverage multiple natural pathways for carbon removal, is comprised of readily available natural materials, and is simple in its structure, enabling flexibility, scalability, and minimal use of anthropogenic inputs.

Prioritizing residues

To minimize the carbon intensity of our materials, we prioritize the beneficial reuse of benign waste products in our supply chain, including residues from existing calcination processes in the cement industry or lower-grade biomass left behind from existing harvesting and processing of biomass products (e.g., wood, agricultural crops, etc.). Regarding all residue products, it is a requirement for Running Tide's suppliers to confirm that our commitment to purchasing such materials does not lead to any compromise in their operational efficiency. In other words, suppliers must assure that they will not deliberately generate additional waste simply because they are aware of a growing market demand for it.

External review and best practices

As we develop and operationalize our sourcing approach for material inputs, Running Tide will seek guidance from our [Scientific Advisory Board, convened by Ocean Visions](#), which enables a direct mechanism for collaboration and oversight with leaders and experts in the scientific community, along with internationally-recognized experts in the forestry, mining, and shipping sectors. This will include annual reviews of our Responsible Sourcing Strategy (this document) to ensure that we stay abreast of best-in-class approaches for sustainable sourcing considerations, and to ensure that our sourcing decisions are reflective of the best available science. Processes have also been designed for supplier vetting and ecological and biogeochemical testing of materials to ensure compliance with sustainability and ethical standards, alongside adherence to required material specifications.

This sourcing strategy has been developed by a cross-disciplinary team of sourcing and logistic experts, carbon market experts, and scientists across Running

Tide, and in collaboration with a number of external leaders in the environmental and forestry spheres. It has been developed based on the best available science and industry best practices, as well as learnings from our initial carbon removal operations and large-scale material sourcing throughout 2022 and 2023. We expect this sourcing strategy to continue to evolve as our material and geographic footprint expands, as we garner additional feedback and recommendations from scientific and industry experts, and as carbon removal industry guidelines for material sourcing continue to mature.

3. Establishing Negative Carbon Supply Chains

In addition to efficiently using the materials we procure to durably remove carbon, Running Tide prioritizes materials and suppliers who proactively reduce emissions within their value chain. Where possible, we also look to provide financial incentives to accelerate the decarbonization of the supply chains we touch.

Embodied emissions driving sourcing decisions

Carbon removal is an [attribute of a negative emissions supply chain](#), and as such, it is imperative that we minimize embodied emissions throughout our supply chain. Material sourcing, transportation of raw materials, and the operation of material processing facilities represent some of the largest contributors to emissions within our project activities. Because we have implemented an internal carbon price, we are incentivized towards sourcing options and procurement decisions that proactively reduce emissions across our supply chain, and drive decarbonization efforts across all our operations. Wherever possible, Running Tide intends to work with our suppliers to decarbonize their production process, such as by replacing fossil fuel use with clean energy alternatives. Our decarbonizing efforts have a multiplying effect, increasing the volume and availability of “green” materials produced without the use of fossil carbon for both our own supply chain and beyond.

Because transportation is the most carbon-intensive component of our supply chain, Running Tide selects the most climate-efficient transportation pathways possible. Though a move to solely renewables-based transport is not realistic at this time, Running Tide tracks and seeks to minimize all transportation emissions. In the short term, Running Tide prioritizes maritime and rail transport, and works to identify inputs in close proximity to deepwater shipping ports, which enables more volume to be moved more efficiently. As our footprint expands and our ability to directly influence our supply chain grows, Running Tide will increasingly adopt renewable or non-fossil fuel-based transportation options.

Supplier participation

Building and operationalizing a negative carbon supply chain is not possible without the close collaboration and buy-in of our supplier partners.

In addition to meeting our needs around material specifications and complying with Running Tide's Supplier Code of Conduct, future suppliers must sign a Climate Attestation, which details specific environmental and climate requirements that suppliers must adhere to at the company level, such as a common intent to mitigate climate change, full disclosure of company-level emissions, documentation to substantiate any carbon claims, and annual sustainability reporting in line with industry standards.

Practically speaking, not all suppliers will currently be at a place on their sustainability journey where they can meet all of Running Tide's climate requirements. In working with suppliers, it is our goal to expedite their climate evolution and accelerate their decarbonization efforts; as such, if a supplier has the intent to improve their sustainability practices such that they meet Running Tide requirements, we will work with them on a case-by-case basis to create a reasonable pathway to procurement, contingent on progression towards achievement of those goals.

4. Net Positive Forest Impact

Forest biomass is an increasingly important and sought-after input for durable carbon removal projects. Terrestrial forest systems photosynthetically fix carbon in the fast cycle, storing it in aboveground biomass (wood), belowground biomass (root structures and soils), and supported secondary biomass, such as mycelium networks. Large-scale sourcing of forest biomass has often been damaging in practice, degrading critical ecosystems and disrupting biodiversity. For biomass-based carbon removal projects to reach their intended mitigation effect, effective land management practices and transparency into the origin of biomass sources are required, along with a comprehensive consideration of the potential indirect effects or secondary land use changes associated with the procurement of the given material. It is critical that standards for sustainable biomass use in carbon removal activities continue to be developed at an industry level, and that early practitioners such as Running Tide help to set best practices that can be modeled and replicated.

Forest biomass is the largest material input in Running Tide's current system.

Forest biomass evaluation

Running Tide believes that forest resources should be evaluated, and use cases prioritized, for the benefit of forest and Earth system health. Whether this means preserving standing forests to provide critical ecosystem services or habitat for rare, threatened, and endangered species, or engaging in ecological forestry practices to optimize forest health and carbon sequestration potential, Running Tide is committed to being an active partner in responsible wood sourcing.

Running Tide targets low-grade forest residues – material that would otherwise largely be burned or left to decay – and, in doing so, [diverts carbon from the fast cycle to the slow](#). We ensure that none of our material is sourced from illegal forestry operations, old-growth forests, endangered tree species, or in any manner that threatens any of the six values identified as [High Conservation Values \(HCVs\)](#) under the Forestry Stewardship Council (FSC) system. We seek to be fully transparent in our sourcing and provide our customers and auditors with the ability

to trace the material inputs that enable carbon to be removed back to a specific supplier and point of origin.

Forest biomass certification requirements

Running Tide prioritizes sourcing from operations that are FSC certified, which is widely considered to be the preeminent industry standard in sustainable forestry certifications. We prioritize biomass from natural forest management, recycled wood, and where absolutely necessary, from FSC-certified plantations. FSC certification protects High Conservation Values, and in natural forests, it maintains balanced age class distribution (i.e. the age of trees across a given landscape), protects old-growth forests, and encourages the regeneration of late-successional old growth forests (LSOG). Though in certain circumstances we may consider materials from FSC-certified plantations, our preference will always be to support natural forest conservation and management practices or utilize recycled wood.

In the event FSC certification is not in use in a given jurisdiction or with a given species, an equivalent certification system will be utilized. We are currently exploring sourcing from operations that are committed to the same values as FSC, including Master Logger Certification (as implemented by the Trust to Conserve Northeast Forests), the American Forest Foundation and The Nature Conservancy Family Forest Carbon Program (AFF/TNC), as well as new FSC models for working with family forests and community/indigenous operations under the FSC New Approaches effort.

Potential forest biomass sources

- **Residual Feedstock:** Residues are materials that are produced as the byproduct of producing a primary material. While some residues may have alternate beneficial uses, most are considered waste and are often landfilled, combusted, or otherwise disposed of. Examples of forest residues include lower economic value tree tops, branches and bark, as well as fuel reduction residues, which are removed from wildfire risk areas to improve forest and climate health. When targeting forest residues, it is important that such utilization only happens after coarse woody debris best practices and targets are implemented in the forest, as decaying organic materials often provide important nutrient and soil carbon benefits. Other residual feedstocks include mill

residues (sawdust, shavings) from primary plants (e.g., sawmills), secondary plants (e.g., furniture factories), or tertiary plants (e.g., where offcuts from other kinds of post-secondary mills are processed).

- **Purpose-Processed Feedstock:** Biomass that has not been intentionally grown or commercially harvested for Running Tide activities, but has been purchased and processed for the purpose of carbon removal. This category could include a number of potential feedstock eligibility, collection, and processing requirements. Several examples of this category include:
 - Already-collected residue tree branches that require additional processing to meet operational specifications.
 - Wildfire fuel reduction, including standing or fallen dead trees and the collection of forest thinnings used to eliminate potential sources of wildfire fuel.
 - “Unmerchantable” material – i.e., forest material that is unsuitable for traditional harvesting or economic use, especially in the case where there is no clear market for that biomass.
 - Material sourced from ecological forest management, in which the removal of a non-native or disruptive species may help to improve the net carbon stock or biodiversity of a given area of forest.
- Regardless of their origin, materials in this category are subject to the same requirements and environmental considerations as all potential Running Tide materials, and in certain cases will require additional visibility into the impact of the material’s sourcing on soil carbon stocks, effective nutrient cycling, and water retention. Supplier attestations are particularly critical to provide transparency into the likely alternative end state of these materials, such as for bioenergy production.
- **Purpose-Grown Feedstock:** Biomass that has been intentionally grown for the purpose of Running Tide activities. Best practices around purpose-grown feedstocks are currently evolving, and Running Tide will avoid sourcing purpose-grown feedstocks until stronger industry standards are developed. In instances where Running Tide sources purpose-grown feedstock, emissions associated with land use change must be accounted for and reported. Running Tide will continue to prioritize residual feedstocks over purpose-grown feedstocks, and at no time will we purchase purpose-grown feedstocks that convert natural ecosystems or HCV-designated areas into managed systems.

Risks of sourcing forest biomass

Running Tide acknowledges the risks associated with sourcing forest biomass for our carbon removal efforts. The table on the following pages, which is not comprehensive, lists several key categories of risks that we consider, and what mitigating measures we take.

Potential risks	Mitigating measures
Sourcing forest biomass can displace other uses that contribute to stable carbon storage	<ul style="list-style-type: none"> When sourcing biomass residues, Running Tide follows the European Commission RED II Directive's cascading principle of biomass use, whereby "woody biomass is used according to its highest economic and environmental added value". In practice, this means targeting biomass that would otherwise be burned or left to decay. When targeting biomass feedstocks, Running Tide assesses the potential alternate use-cases for that material to ensure that any carbon removed is additional and not displacing other valuable climate-related uses.
Sourcing forest biomass can deplete soil carbon	<ul style="list-style-type: none"> When sourcing residues, Running Tide consults with external forestry experts to ensure that the material we are sourcing is in excess of what is needed for soil nutrient cycling. When the material sourced is not a residue, relevant land use change and soil carbon modeling may be needed to fully <u>evaluate the impact of sourcing on the total net carbon stock</u>.
Sourcing forest biomass can cause environmental degradation	<ul style="list-style-type: none"> Running Tide prioritizes the use of FSC-certified forest products. FSC certification promotes forest, water, and soil health by prohibiting harvests that impact HCVs, rely on illegal forestry operations, or target primary forests and endangered tree species. Running Tide prioritizes sourcing residues from harvest operations, sawmills, and fuel reduction efforts over purpose-harvested feedstocks to minimize our impact on managed forests. If the biomass sourced is material enough to meaningfully change the economics or land

Potential risks	Mitigating measures
	<p>management of a given area, Running Tide will engage with the local forest community, including indigenous peoples and forest users, to ensure we have a holistic understanding of the economic, environmental, and community impacts of our sourcing decisions.</p>
<p>Sourcing forest biomass can fuel secondary land use changes</p>	<ul style="list-style-type: none"> • Running Tide only sources forest biomass from well regulated jurisdictions where forest monitoring ensures net re-growth over a stipulated period of time. • While current sourcing volumes are not material enough to meaningfully impact the economics of forest biomass, Running Tide carefully monitors the market for biomass residues to ensure that our demand does not contribute to the conversion of natural systems into managed forests or agricultural land. This includes monitoring and accounting for any additional fossil energy use associated with our sourcing activities related to a potential change in biomass demand. • Running Tide's carbon removal approach is multi-pathway, and as we scale operations it is expected that we will rely increasingly on mineralization and algae growth, and decreasingly on terrestrial biomass, as a share of net carbon removed.
<p>Forest certifications may not be reflective of the reality on the ground</p>	<ul style="list-style-type: none"> • As part of Running Tide's Supplier Code of Conduct, Running Tide has the "right to audit" suppliers or inspect suppliers' facilities to confirm compliance. Running Tide will conduct annual audits on our suppliers and material supply shed in collaboration with external auditors and other forestry experts, and suppliers that behave in a manner that is inconsistent with the Code of Conduct or best practices for sustainable land management risk termination of their business relationship with Running Tide. • Suppliers are required to provide attestations specific to materials sources as proof of baseline conditions, particularly in regards to the alternative end-state of residue inputs. This includes records

Potential risks	Mitigating measures
	of the origin of material sources, transportation details, and any associated emissions.

Table 1: Potential risks - and mitigation measures - associated with sourcing forest biomass.

Running Tide is also actively exploring alternative biomass feedstocks, such as agricultural residues, to reduce demand on forest residues and in consideration of the comprehensive climate impact associated with a given feedstock. We will implement resource stewardship and social-environmental screening when and where alternatives are used, and consult with external experts to ensure material-specific industry best practices are followed.

How we measure net positive forest impact

- The FSC performs an annual audit on all certificate holders to ensure conformity with [FSC Principles and Criteria](#). Running Tide will review these audits on an annual basis to confirm that our suppliers remain compliant with FSC standards.
- Supplier attestations related to the additionality, alternative end state, and origin of biomass sourced are required to confirm material eligibility, alongside records related to material transportation, processing, and storage. Running Tide has the right to audit and inspect supplier operations to confirm compliance. Running Tide works with a range of external experts to evaluate individual suppliers and conduct due diligence, both before and after signing a sourcing agreement.
- In the future, if Running Tide sources meaningful quantities of non-residue forest biomass, locally-specific land use change and soil carbon modeling will be needed to effectively evaluate the impact of material sourcing on the net carbon stock of the area in question.
- As we scale, a more holistic evaluation of the impacts of residue sourcing on the market for waste materials will also be required to ensure proper forest incentives remain aligned.

5. Net Positive Ocean Impact

Running Tide selects materials with the goal of improving ocean health. In addition to terrestrial biomass, our carbon buoys may contain carbonates and/or macroalgae, both of which reduce ocean acidification by interacting with fast cycle carbon that is present as dissolved carbon dioxide in the upper levels of the ocean. We avoid deleterious impacts on the ocean by ensuring that all materials used are natural and commonly occurring in the ocean, including non-proliferating variants of purpose-grown macroalgae, minerals such as carbonates that are distributed throughout the world's oceans, and terrestrial biomass that already enters the ocean in vast quantities through rivers and other natural pathways.

Environmental screening and evaluation

All materials utilized by Running Tide are subject to environmental testing in a laboratory setting prior to being introduced into the ocean, to ensure that pollutants or toxins are not inadvertently introduced to the marine environment. This process, which may be conducted by Running Tide or an external partner lab, includes elemental analysis, contamination testing, and material reactivity testing. Individual materials follow a staged progression process throughout lab testing, with defined "exit criteria" at each phase of evaluation to ensure that all materials meet our core ecological and system design requirements prior to undergoing carbon buoy design testing or coastal field trials.

For both terrestrial biomass and macroalgae, this testing includes a biological evaluation against basic biological rubrics (such as if the species is invasive to the region or not), an assessment of the biogeography (i.e., the natural geographic distribution) of the species in question, nutrient analysis (such as evaluating the C:N:P, or Carbon-Nitrogen-Phosphorus ratio, of the organic material), conducting biocide analyses for terrestrial biomass, and reactor testing across a range of variables to ensure viability. For macroalgae, sorus tissue is collected locally via divers in the areas where we operate and brought into the laboratory setting for testing prior to propagation. When collecting this initial sorus tissue, we are mindful to maintain local biodiversity by not depleting local species populations.

Alkaline material evaluation

When sourcing alkaline materials, Running Tide considers both primary mined products such as calcium carbonate, as well as residual byproducts such as alkaline brines from desalination and lime kiln dust from calcination. When prioritizing which alkaline materials to target for carbon removal, we take a number of factors into account, including the carbon intensity and ecological impact of production, the presence of any harmful major, minor, or trace elements, shipping distances from production site to port, packaging and shipping options, as well as any material handling considerations.

Currently, lab testing conducted on all alkaline materials we consider includes a toxic metal concentration analysis and similar reactor testing, which measures material dissolution rate, alkalinity generation, and trace metal release. Running Tide is developing a comprehensive suite of environmental impact indicators against which we can rate these alkaline materials, to avoid sourcing materials that could negatively impact the climate, as well as the health of freshwater and marine resources.

How we measure net positive ocean impact

- Material-specific testing and quantification of biological and chemical conditions.
- Material-specific assessment and review of species biogeography and location eligibility.
- Material-specific elemental, toxicity, and biocide analyses.
- External laboratory testing and comparison of results against acceptable concentration guidelines.
- Material reactivity testing in laboratory settings against ocean conditions.
- In certain cases, coastal or open ocean research is conducted to answer critical research questions and evaluate materials in the real-world environment, often in collaboration with leading academic institutions.
- Over time, we expect our measurement capabilities and understanding of key environmental indicators related to our material inputs to continue to mature.

6. Net Positive Community Impact

Running Tide operates in – and our supply chain extends into – communities that are the frontline of the climate crisis. Working waterfronts reliant on fishing and aquaculture, forest communities whose livelihoods are tied to effective land management and stewardship, and additional communities throughout our supply chain are all impacted by our work. In many cases, these communities possess inherent knowledge of, and experience working in, their local environment; as such, they are ideal candidates for employment, and often require minimal retraining and skills development.

It is Running Tide's responsibility to make sure our impact on communities is positive, to take proactive measures to support the maintenance and resilience of healthy communities, and to ensure that the perspectives and guidance of community leaders are sought out and integrated into the project and operational decisions. This extends to the communities tied to the materials we source, as well as those in which we operate directly.

In addition to monitoring the climate and ecological impact of our sourcing, Running Tide also tracks the socioeconomic impacts of our project operations and the associated well-being of the stakeholders involved in our supply chains. Our forest products are FSC certified, which guarantees that workers involved in harvest operations are provided with adequate training, personal protection equipment (PPE), safe transport to and from the work site, access to health care, potable water supply, and safe sanitation facilities. FSC also prioritizes providing meaningful, fairly compensated employment and wages, emphasizes the hiring of people in the local community, and allows workers, should they choose, to organize and negotiate working conditions. We will ensure that socioeconomic values reinforce sustainability at the community level, and support the protection of the rights and resources of indigenous and traditional communities.

In areas where Running Tide does not currently have direct engagement with impacted communities, it is contingent on Running Tide suppliers to confirm their compliance with the community requirements dictated by our Supplier Code of Conduct, or risk the termination of their procurement relationship, as they represent Running Tide in all community relationships related to our supply chain. Provisions

laid out in the Code of Conduct include the supplier's intent to foster economic and social development and contribute to the sustainability and well-being of the communities where they operate; the supplier's requirement to respect the land rights of individuals, indigenous people, and local communities in accordance with local laws, the [International Labour Organization's Indigenous and Tribal Peoples Convention](#), and the [United Nations Declaration on the Rights of Indigenous People](#); and the requirement to respect the rights of local communities to decent living conditions, education, employment, social activities, and the right to Free, Prior, and Informed Consent (FPIC) to developments that affect them and the lands on which they live, with particular consideration for the presence of vulnerable groups.

How we measure net positive community impact

- Running Tide measures, and will report on, baseline socioeconomic impact metrics related to project activities at the end of each deployment season, including job creation, economic development, impact on local income disparity, and more. Over time, we plan to integrate this reporting into deployment-specific metrics.
- In addition to this baseline measurement and maintaining an active dialogue and engagement with the communities in which we operate, Running Tide is currently developing quantitative socioeconomic impact assessments specific to our project activities to establish baseline conditions in the communities we touch. These assessments will be designed in partnership with affected communities, monitored over the life of the project, and reported on alongside the quantification of the net carbon removed from our system.

7. Material and Supplier Vetting

As mentioned throughout, Running Tide has implemented a number of internal checks and balances to ensure that suppliers across our carbon removal supply chain are aligned with Running Tide's values and that the materials we purchase are environmentally and socially sound. These internal processes are described below:

Supplier identification

Running Tide identifies suppliers of interest based on material availability, geography, and pre-screening of company environmental standing via public documentation. We vet suppliers through additional channels based on relationships developed through our Scientific Advisory Board and similar experts throughout climate and natural resource management related fields, and engage directly with environmental NGOs, universities, and industry groups with relevant expertise in environmental stewardship and community relations. Once relevant suppliers have been identified and vetted through the appropriate channels, our full diligence process begins.

Supplier data sharing

As part of the diligence process – and prior to agreeing to material procurement – Running Tide evaluates a potential supplier's value chain and the carbon intensity of their operations, which directly informs their potential eligibility as a Running Tide supplier. We seek counterparties who have completed at least an initial assessment of their carbon footprint and have a mature sustainability strategy in place, or who are currently working with potential counterparties to complete this assessment, and have clear reporting and disclosure processes.

Supplier initial risk screening

Running Tide conducts initial screenings to ensure that any potential supplier takes appropriate measures to ensure workplace safety and ethical business conduct, and is monitoring and minimizing negative environmental impacts across its operations. In addition to ensuring environmental protection and compliance, this process includes screens around health and safety (such as compliance with

occupational health and safety laws and regulations) and human rights and fair labor practices (including anti-discrimination and the prohibition of child labor or forced labor), along with a deep-dive into a potential supplier's publicly available documentation (such as CDP reporting, the supplier's Annual Report, and the supplier's Annual Sustainability Report, as applicable).

Material evaluation

While the process is dependent on the type of material in question and the material's origin, the general process flow for evaluation prior to sourcing is as follows:

1. Biological carbon removal materials are assessed based on how endemic they are to the region in question.
2. Environmental and socioeconomic impacts of material production are assessed to promote ethical sourcing of materials.
3. The additionality of materials is assessed (i.e., the expected end state of the materials in the absence of Running Tide activities and the associated impact on the fast and slow carbon cycles), along with the expected embodied emissions associated with their production and transportation. Candidate materials are pre-screened for potential environmental hazards, including harmful trace, minor, and major elements, pesticides, and herbicides. Running Tide does not pursue any materials that exhibit abnormally high concentrations of potential environmental hazards during this initial stage of screening.
4. Experiments are conducted at Running Tide's laboratory facilities and in collaboration with external labs to analyze the biogeochemical evolution of input materials, including dissolution, leaching, and remineralization, in order to maximize the net carbon sequestered through our activities while minimizing any negative environmental impacts.
5. Additional experiments are conducted to monitor potential ecological and biogeochemical impacts:
 - Experiments are conducted both in the lab setting and (eventually) in the field, and the natural waters (seawater, groundwater) that have reacted with the deployed materials for environmental hazards are screened and tested. The resulting concentrations of analytes (elements, herbicides, pesticides) are compared in these water samples to their concentrations in unreacted (i.e., control) waters and – for regulated analytes – to the range of

concentrations allowed by law to ensure that concentrations in the reacted waters do not pose an environmental hazard. Running Tide does not pursue any materials that generate reaction products that exceed these thresholds during this second stage of screening.

- Environmental impacts of our activities on the seabed are assessed by conducting experiments in which we place the materials that are intended to sink to the ocean floor in benthic environments proximal to planned deployments sites. The impact of placing these materials on the ecology (diversity and abundance of species) and biogeochemistry (DIC, POC, DOC, pH, alkalinity, DO, elemental concentrations, nutrients, turbidity, etc.) of these environments is then quantified.
6. Reacted waters are screened from successively larger field trials to monitor potential ecosystem impacts. Water samples are collected to monitor for a similar suite of environmental parameters (DIC, POC, DOC, pH, alkalinity, elemental concentrations, turbidity, etc.) as evaluated during the laboratory and smaller-scale field experiments. The resulting concentrations of the analytes present in the larger-scale field trials are then compared to the concentrations of these analytes in unreacted (i.e., control) waters and – for regulated analytes – to the range of concentrations allowed by law to ensure that the concentrations in the reacted waters continue to not pose any environmental hazard when deployed at successively larger scales.

Supplier Code of Conduct

All suppliers must sign Running Tide's Supplier Code of Conduct, which ensures their compliance and commitment to Running Tide's operational and ethical standards. The Supplier Code of Conduct covers a range of mandatory requirements suppliers must adhere to in order to exhibit their commitment to safe and responsible business practices, including considerations around legal practices, human rights and fair labor practices, health and safety considerations, and third-party compliance and monitoring.

Supplier Climate Attestation

All suppliers must sign Running Tide's Supplier Climate Attestation, which details the environmental and climate requirements a Running Tide supplier must strive for and adhere to. The goal of this Climate Attestation is to both reduce Running Tide's

own value chain emissions as well as to encourage our suppliers to take action to mitigate climate change and increase their level of sustainability disclosure. This attestation is modeled on procurement best practices across a range of sectors, including Salesforce's supplier [Sustainability Exhibit](#).

While rigorous testing of materials prior to their procurement and careful supplier vetting alone will not ensure the intended positive impact, these actions help to set a high bar that both our suppliers and materials must clear prior to being incorporated into Running Tide's carbon removal operations.

8. Appendix - Running Tide Governance Principles

Running Tide has developed a staged governance framework, applicable from initial research through scaled operations, that can inform our work alongside the industry-wide codes of conduct that are in development from the American Geophysical Union, Climateworks Foundation, The Aspen Institute, and others. These principles, summarized in our [publicly available, peer-reviewed Framework Protocol](#), provide a guide by which to demonstrate project maturity and ethical decision making.

While these standards continue to be developed and codified at the industry-level, organizations conducting interventions in the ocean must be clear about the principles that inform their decision-making. These principles must be demonstrable in practice and aligned with standards for responsible conduct (as determined by diverse stakeholders across the industry), which can serve as a gating mechanism towards subsequent phases of research or operations. Smaller scale, low-risk research and deployment activities can be utilized to efficiently develop, test, refine, and operationalize effective governance structures that are designed for real-world application. This will ensure the creation of practical and actionable standards that mitigate risks and ensure compliance without delaying critical research.

For Running Tide, these principles include the following:

- **Science and research:** Is the project based on foundational science? Has the project identified key research questions and developed plans to address them?
- **Environmental and ecological:** Has the project effectively considered the potential environmental and ecological impacts of planned activities, both positive and negative?
- **Legal and regulatory:** Does the project have clear permission to operate and an understanding of the legal and regulatory frameworks that impact the proposed activities?
- **Technical:** Do those conducting the project activity possess the technical capacity to understand project impacts, and effectively monitor and measure results?

- **Social, community, and equity:** Have those conducting the project worked with all relevant local and community stakeholders to educate, engage, and garner feedback on plans and research?
- **External verification and oversight:** Have those conducting the project ensured that independent expert parties can effectively review and validate the project work, approach, and results?
- **Internal organizational structure:** Do those conducting the project have organizational checks and balances in place to ensure decisions are science-based and responsibly agreed upon?
- **Information sharing and transparency:** Has the project demonstrated the necessary level of transparency around processes, plans, and results such that reviewers and the public can effectively evaluate the proposed system?

Compliance in these areas may be demonstrated via a number of pathways, including but not limited to publicly available educational materials (i.e., white papers, research roadmaps, and project-specific experimental plans), defined oversight processes (i.e., consultation with an independent scientific advisory board, independent and documented reviews of work against defined standards such as ISO by accredited auditors), and records of project-specific documentation (i.e., permitting, stakeholder consultation records, and pre-and post environmental evaluations).

Failure to meet applicable standards in any individual category risks social license and trust, and may prevent the project from proceeding as planned.

Specific to regulatory oversight, clear permitting and permission to operate at the relevant local, state, federal, tribal, and international levels must be demonstrated prior to planned deployments, including alignment with any current or future national or subnational compliance carbon programs within proposed operational locations.