Request for Proposals (RFP): Great Lakes ReNEW Use-Inspired R&D and Translation Grant Program

Key Milestone	Date
Applications Open	March 28th, 2025
Concept Paper Due	May 2nd, 2025 at 11:59PM CT
Notification of Invited Teams to Submit Full Proposals (Feedback provided with Encourage/Discourage decision)	Week of June 2nd, 2025
Full Proposals Due	July 11th, 2025 at 11:59PM CT
Expected Date for Selection Notification	Week of August 11th, 2025
Anticipated Project Start Date	March 2026

- Interested applicants must submit a Concept Paper by the deadline to be eligible to submit a Full Proposal.
- To apply to this RFP, applicants must register with and submit application materials through the online application portal in Amplifund.
- Applicants must designate primary technical and business points-of-contact in their application with whom ReNEW will communicate to conduct negotiations. If the application is selected for award negotiations, it is not a commitment to issue an award. It is imperative that the applicant be responsive during award negotiations and meet negotiation deadlines. Failure to do so may result in the cancelation of further award negotiations and rescission of the selection.
- Current Innovation, NFP (“Current”), was selected by the U.S. National Science Foundation (NSF) for the Regional Innovation Engines program to lead in the establishment and operation of the Great Lakes Water Innovation Engine (“Great Lakes ReNEW” or “ReNEW”). This funding opportunity is funded in whole or in part by Assistance Listing Number 47.084: NSF Technology, Innovation and Partnerships under Federal Award Number 2315268.

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Executive Summary

Solicitation Title	Great Lakes ReNEW Use-Inspired R&D and Translation Grant Program
Means of Submission	Electronic
Amount to be Awarded	$350k-500k per successful award
Anticipated Number of Awards	Great Lakes ReNEW anticipates making up to 10 awards, depending on the quality of the proposal pool and the funding available. Great Lakes ReNEW may issue one, multiple, or no awards.
Project Duration	12-24 months

Limited Submission Eligibility	No limit on the number of submissions per institution. No more than two (2) submissions per individual as PI (co-lead). No restriction on the number of submissions as a non-PI.
Performance of Work in the United States	Unless a waiver is provided, the lead institution must certify that 100% of the direct labor cost for the project (including participating institution labor) will be incurred in the United States and its territories.
Cost Share Requirement	None.
Application	Applications are available in the online application portal in Amplifund, starting 3/28
Questions	Submit questions to mpierce@currentwater.org. Questions and answers will be posted on the Amplifund application portal.

Eligibility Information

- All applications are required to name two co-leads, preferably from separate institutions to encourage cross-institutional collaboration.
- At least **one co-lead** must be associated with an institution that is a participant in either the Current Research Consortium (CRC) or the Current Industry Consortium (CIC) at the time of submission. Institutional participants are listed below.

  CRC & CIC institutions:
  - University of Illinois Urbana-Champaign
  - University of Illinois Chicago
  - University of Chicago
  - Illinois Institute of Technology
  - Northwestern University
  - University of Minnesota, Twin Cities
  - University of Wisconsin-Milwaukee
  - Marquette University
  - Purdue University
  - The Ohio State University
  - University of Cincinnati
  - University of Michigan
  - Argonne National Laboratory

  - The Metropolitan Water Reclamation District of Greater Chicago
  - The Chicago Department of Water Management
  - Ingredion Corporation
  - Exelon Foundation
  - Sentry Equipment Corporation

- There is no limit on the number of proposal submissions allowed per institution. No more than two (2) submissions per co-lead are allowed, and when submitting multiple proposals they must be scientifically or technologically distinct.
- Startups are encouraged to partner with a CRC/CIC institution and participate in the solicitation.
- Co-leads not within the Great Lakes ReNEW region of service (Indiana, Illinois, Michigan, Minnesota, Ohio, and Wisconsin) are still eligible to participate as long as one co-lead is from the CRC & CIC institutions list. For those not located in the region of service, consider and make a case for how your research/technology/business will still have a regional impact on the Great Lakes.
- Collaborations, either funded or unfunded, with other non-lead cross-sector partners in our region (e.g., other institutions of higher education and/or organization types) are allowed and highly encouraged.
- All partners receiving subawards must meet all applicant eligibility requirements of the NSF as outlined in the Assistance Listing and must be able to receive federal funding.

Overview of the Great Lakes Water Innovation Engine

The Great Lakes Water Innovation Engine (Great Lakes ReNEW) is one of ten inaugural engines awarded under the U.S. National Science Foundation (NSF) Regional Innovation Engines (NSF Engines) initiative. The NSF Engines program aims to: 1) Catalyze and foster innovation ecosystems in emerging technology focus areas; 2) Address pressing national and societal challenges; and 3) Promote and stimulate economic growth. More information about the NSF Regional Innovation Engines initiative can be found at: https://new.nsf.gov/funding/initiatives/regional-innovation-engines

In January 2024, the NSF awarded up to $160 million over 10 years to Current, a Chicago-based water innovation hub, to establish, develop, and grow Great Lakes ReNEW. Also known as the Great Lakes Water Innovation Engine, ReNEW's goal is to accelerate the transition to a circular blue economy through:

- **Use-inspired R&D** on selective separation and resource recovery of nickel, cobalt, lithium, nitrogen and phosphorus, organic carbon, and elimination of PFAS and other contaminants from water and wastewater.

- **Translation of innovation to market**, with leading regional water hubs and testbeds in Chicago, Milwaukee, and Cleveland, launching and investing in dozens of watertech startups, and building a centralized testbed for technology validation.
- **Workforce development** to train people for quality jobs and careers and support K-12 STEM education.

ReNEW's economic impact will create new industries and jobs in the Great Lakes region, positioning the region as a leader in water innovation and circular economy practices. ReNEW's environmental impact will improve human and planetary health through the discovery, development, and deployment of new technologies and practices for circular water management.

Broad Areas of Interest to the Great Lakes Water Innovation Engine (ReNEW)

R&D and Translation efforts for the NSF Engines Program are ambitious, complex, innovative, multidisciplinary, and multi-stakeholder, advancing key technologies and addressing pressing societal, national, and geostrategic challenges. These efforts will be iterative and integrated, with overlapping steps between R&D, translational research, and translation to market. Great Lakes ReNEW is interested in furthering water and resource recovery technologies in several key areas described below.

- **Resource recovery of valuable materials from water and wastewater.** The selective recovery of critical minerals (e.g., lithium, rare earth elements), nutrients (e.g., nitrogen, phosphorus), and energy (e.g., organic carbon, biogas), from municipal and/or industrial waste streams.

- **Selective separation of harmful contaminants from water and wastewater.** The efficient selective separation, concentration, and destruction of existing and emerging priority contaminants (e.g., PFAS, microplastics) from municipal and/or industrial waste streams.

- **Water and energy reduction and reuse.** Research that enables either a reduction in use or an increase in reuse of water for heavy water users (e.g., mining, quantum computing, data centers, semiconductors, batteries, food and beverage, agriculture, and utilities). Technologies could include AI-enabled tools, data platforms, or sensor networks to monitor and reduce consumption at industry or utility facilities. The development or advancement of technologies that enable wastewater reuse in industrial operations, reduce energy needs via water reuse, or yield greater efficiency with existing water resources.

- **Emerging technologies landscape and benchmarking.** Conducting comprehensive landscape analyses to identify, evaluate, and benchmark existing and emerging technologies in resource recovery, circular economy, and water management. All research on emerging technologies listed requires robust Techno-Economic Analysis (TEA) and Life Cycle Assessment (LCA) for understanding the technology's market viability. Establishing a consistent framework to compare the Engine's R&D activities with global advancements in areas such as selective recovery, contaminant destruction, water reuse, and facility modernization.

- **Political/socioeconomic dimensions and water governance.** Projects that consider the political, social, and economic drivers of resource recovery, water and wastewater and water efficiency.

- **Data infrastructure for Great Lakes ReNEW.** Frameworks/infrastructure and tools for data generated by ReNEW. The secure storage of data and facilitation of easy sharing of datasets among partners. Examples include a data repository, data sharing portal, etc. Must include robust security considerations that work for mixed stakeholders (e.g., universities, government agencies, nonprofit organizations).

- **Building a Connected Testbed Network in the Great Lakes.** ReNEW will support the growth of water technology startups, researchers, and industry by providing opportunities for rigorous pilot testing and scaling, through a connected testbed network. Of interest are projects that build or scale existing physical locations for use as resource recovery technology testbeds. These could be bench-scale, pilot-scale, or full-scale commercial operation testbeds. Testbed sites will integrate and validate one or all of the following technologies: materials for selective separation (e.g., membranes), process technologies, and sensors.

- **Developing a Centralized Testbed Facility:** A resource recovery focused centralized testbed – a pilot-scale testbed that would function as a hub in the connected testbed network will be designed and developed. Designed for testing and validating technologies, this facility may include features such as physical spaces for piloting, offices, events, education and workforce development training. A range of waste streams (e.g., municipal, commercial) as well as specialized sources (e.g., food processing wastewater, battery recycling) will be included. Additionally, manufacturing infrastructure could be available among ReNEW's academic and industrial partners. This facility would help support technologies at TRLs 5-9.

- **Modernization of existing technologies with emergent technologies.** The retrofitting of existing technologies/facilities with novel sensors, data platforms, process technology upgrades, and resource recovery technologies. Integration of technology to existing infrastructure/workflows (e.g., wastewater treatment plants, utility facilities).

- **Critical minerals recovery and market drivers.** Market research and mapping of the economic factors/market drivers for critical materials, both in the United States and globally. Including the evaluation of market trends, emerging technologies, and key industry players to uncover pathways for value creation from waste streams.

Existing ReNEW RD&T Projects

Table 1: *Currently funded R&D and translation projects, their topic areas, and lead institutions. MP = materials platform, PT = process technologies, SP = sensing platform, and SST = subsystem testbed.*

RD&T PROJECT	TOPIC	LEAD INSTITUTIONS
MP-1	Selective Capture & Destruction of PFAS	University of Illinois Chicago & Argonne National Lab
MP-2	Critical Minerals (Cobalt & Nickel) Extraction	University of Chicago & Argonne National Lab
MP-3	Nutrient (Phosphorus) Capture & Recovery	Northwestern University & Purdue University
PT-1	Carbon/Energy (Biomethane) Recovery from Wastewater	Argonne National Lab & Marquette University
PT-2	Nutrient (Nitrogen) Recovery from Wastewater	Northwestern University & University of Minnesota
SP-1	PFAS & Critical Mineral (Cobalt) Sensors	University of Chicago & Argonne National Lab
SP-2	Nutrient (Nitrogen, Phosphorus) & Heavy Metal (Lead, Mercury) Sensors	University of Minnesota & Marquette University
SST-1	Bench-scale Membrane Materials Testbed	University of Illinois Chicago & Argonne National Lab
SST-2	Nutrient Recovery - Urine Source Separation Testbed	University of Michigan & Illinois Institute of Technology
SST-3	Wet Weather System & Sensor Testbed	Rapid Radicals Technology & Marquette University
SST-4	Wastewater Treatment Process Testbed	University of Cincinnati & US Environmental Protection Agency (EPA)
SST-5	Smart Monitoring & Stormwater Infrastructure Testbed	University of Illinois Urbana-Champaign & University of

		Illinois Chicago

Areas of Interest Specific to this Funding Call

ReNEW aims to support use-inspired research and translation efforts for technologies focused on the resource recovery of valuable materials and the removal of harmful contaminants from water and wastewater and sustainable water technology. ReNEW is looking to fund collaborative proposals in the following areas.

This RFP defines wastewater streams of interest as those including wanted and unwanted aqueous byproducts outlined in the priorities below. Wastewater streams of interest include (but are not limited to), for example:

- Municipal wastewater
- Industrial manufacturing wastewater
- Mining drainage, discharge, and tailing ponds
- Oil and gas produced water
- Agricultural runoff, animal feed lots

Use-Inspired R&D/Translation Priorities

- **Resource recovery of valuable materials from water and wastewater.** Projects that demonstrate the selective recovery of critical minerals (e.g., lithium, rare earth elements), nutrients (e.g., nitrogen, phosphorus), and energy (e.g., organic carbon, biogas), from municipal and/or industrial waste streams. Technology should have the potential to lead to scalable and implementable real-world solutions and processes for selective separation.
    - **Priority: Development of novel materials for critical minerals selective separations.** Projects that develop, utilize, and/or manufacture membrane/electrode materials and sorbents for the selective separation of critical minerals.
    - **Priority: AI/ML-enabled sensors and sensor networks.** Projects that develop, utilize, and/or manufacture in-line and real-time sensors, with a focus on critical minerals and nutrients. Of interest is ultra-low level detection (e.g., ppb) and technologies that reduce the current state-of-the-art limit of detection for target resources.

- **Selective separation of harmful contaminants from water and wastewater.** Projects that showcase the efficient selective separation, concentration, and destruction of PFAS from municipal and/or industrial waste streams. Technology should have the potential to

lead to scalable and implementable real-world solutions and processes for selective separation.
    - **Priority: Development of novel materials for selective separations of PFAS.** Projects that develop, utilize, and/or manufacture membrane/electrode materials, sorbents, and catalysts for the selective separation and destruction of PFAS.
    - **Priority: AI/ML-enabled sensors and sensor networks.** Projects that develop, utilize, and/or manufacture in-line and real-time sensing of harmful contaminants from waste streams, with PFAS being a top priority contaminant. Of interest is ultra-low level detection (e.g., 1 ppt) and technologies that reduce the current state-of-the-art limit of detection for target contaminants.

- **Water and energy reduction and increased water reuse.** Development or advancement of technologies that enable wastewater reuse in industrial operations, reduce energy needs via water reuse, or yield greater efficiency with existing water resources.

- **Testbeds.** Projects that build or scale existing physical locations for use as resource recovery technology testbeds. These could be bench-scale, pilot-scale, or full-scale commercial operation testbeds. Testbed sites should be able to integrate and validate one or all of the following technologies: materials for selective separation (e.g., membranes), process technologies, and sensors.
    - **Priority:** High priority projects of interest are those that include an industry partner.
    - **Priority:** Projects of interest are those that are focused on designing bench-scale subsystem testbeds for testing technologies at TRLs 4-5.

- **Modernization of existing technologies with emergent technologies.** Projects that focus on the retrofitting of existing technologies/facilities with novel sensors, data platforms, process technology upgrades, and resource recovery technologies. Integration of technology to existing infrastructure/workflows (e.g., wastewater treatment plants, utility facilities).

Workforce Development

Alongside R&D and translation, the third pillar of work under Great Lakes ReNEW is workforce development - training for jobs and careers in the water cluster; engaging K-12 students in water-STEM programs; and launching/supporting water-specific curriculum offerings within higher education institutions.

ReNEW partners have committed to ambitious goals around training individuals for careers in water-sector industries; engaging students in water-STEM programs; and launching/supporting

water-specific curriculum offerings in higher education institutions. ReNEW will fulfill these goals through a number of avenues, including through an RFP process for workforce specific initiatives. However, as economic growth is a core value of ReNEW, action toward these goals is woven into all aspects of engine programming, including research, development, and translation projects

These workforce efforts promote skills that are in demand today, as well as skills needs that will arise as the technologies described in this RFP are implemented at scale. To support this third pillar, each proposal should include the following:

1. A summary of the types of technical skills and/or certifications that would prepare workers to engage with the technology being developed.
2. A description of any workforce development or STEM education initiatives that your institution or partnership is engaged with or plans to engage with, including (but not limited to) an internship program, K-12 classroom involvement, contributions to job shadowing or career exploration activities.
3. The name and contact information of the staff at your institution that oversee existing workforce programming or that will commit to working with ReNEW staff to contribute to workforce initiatives that are in development. These initiatives include:
    a. Career Pathway Mapping: Mapping emerging skills demands against the existing workforce, and developing recommendations for future training programs. If there are industry partners on your proposal, leverage their internal workforce data to support accurate mapping.
    b. K-12 STEM Strategies: Serve on the Blue Economy Ecosphere Steering Committee to help identify STEM education priorities, and ensure future curriculum aligns with emerging research and technology. Partner with a STEM program to provide mentorship, field trips, guest speakers or curriculum to enrich existing STEM offerings.
    c. Improve or co-design a job training program: partner with a workforce development partner or employer to add new curriculum, concepts or modules to existing training (e.g., partner with a utility to create a module on emerging contaminants for an existing or planned apprenticeship program).
    d. Create higher education curriculum: create new courses, or add new components to existing courses, that respond to emerging technology and science and align with ReNEW priorities. Partner across institutions (and especially with community and technical colleges) to offer educational opportunities to a broader group of students. Consider creative delivery models, including having graduate students or postdocs teach emerging science at 2-year institutions.

Postdoctoral Mentorship Plan

If postdoctoral fellows are included in your proposed project, a postdoctoral mentorship plan is required. Great Lakes ReNEW has a postdoctoral scholar mentoring plan which applicants can utilize, or provide their own.

Graduate Student Mentorship Plan
If graduate students are included in your proposed project, a graduate student mentorship plan is required. Please note that separate plans are not required for proposals that include both postdocs and graduate students.The plan should, however, specify how different components of the mentoring program will be enacted for the two different types of researchers

Regional Engagement

Great Lakes ReNEW requires all proposals to have a Regional Engagement plan. Regional Engagement plans must outline specific strategies to meet one or multiple of the Engine's regional engagement goals described below:

Increase participation in the Engine and Ecosystem: aim for full participation in and access to the circular blue economy broadly, and in the Engine specifically. Create opportunities for people and places across our region of service to participate in working groups, consortia and other decision-making bodies to promote more informed strategies and efficient use of resources.
Locate Engine and Ecosystem investments in areas in need of access to economic opportunity: locate Engine investments and attract aligned investment in and around communities that are both well positioned for and in need of economic growth. Attract and grow businesses in places that can both benefit from improved access to jobs and improved water quality.
Create pathways to ownership across the Ecosystem: develop strategies, programs and partnerships that prioritize pathways to wealth building and promote entrepreneurship and ownership across the region.
Develop pathways to employment education for all people in the region: both within the Engine and with programs and strategies built by the Engine and Ecosystem, create pathways to family-supporting employment.

Areas Specifically Not of Interest

- Desalination
- Resource recovery directly from brines including geothermal brines and concentrated desalination brines.

Awardee Support

As a ReNEW partner, awardees will receive support services in addition to the monetary value of the award. These include but are not limited to:

- Leadership

- Marketing/visibility. ReNEW partners and their institutions are promoted through a variety of media and communication channels. These include local, state, regional, and national platforms.
- Workforce development support and access to the ReNEW network of partners
- Ecosystem building
- Commercialization/technology translation (e.g., customer discovery, business building, go-to market planning)
- Engagement with the Current industry and research consortia (CIC & CRC)
- Evaluation support
- Field building and network engagement. Access to the broader ReNEW network of partners - spanning 50+ organizations (startups, researchers, industries, utilities, government) across the Great Lakes region.

Proposal Format

Formatting, all sections: 8.5” x 11” page size; single-spaced; 1” margins; typeface no smaller than 11-point Times New Roman, 11-point Calibri, or 10-point Arial.

Concept Paper

Length: Not to exceed 4 pages maximum. Commercialization section (1 page max) and references will not be counted against the page limit.

Concept Paper Elements

1. **Project Summary**
    a. Describe the proposed concept with minimal jargon and explain how it addresses either the R&D or Translation priorities described in the RFP.
2. **Innovation and Impact**
    a. Clearly identify the problem to be solved with the proposed technology.
    b. Describe how the proposed effort represents an innovative and potentially transformational solution to the R&D or Translation priorities posed by the RFP.
    c. Explain the concept’s potential to be disruptive compared to existing or emerging technologies.
3. **Proposed Work**
    a. Describe the final deliverable(s) for the project and the overall technical approach used to achieve project objectives.
    b. Discuss alternative approaches considered, if any, and why the proposed approach is most appropriate for the project objectives.
    c. Include the waste stream to be used in the project and/or target user of the technology
    d. Include the Technology Readiness Level (TRL) and Adoption Readiness Level (ARL) of the proposed technology or technologies.

e. Describe the background, theory, simulation, modeling, experimental data, or other sound engineering and scientific practices or principles that support the proposed approach. Provide specific examples of supporting data and/or appropriate citations to the scientific and technical literature.

4. **Team Organization and Expertise**
   a. List the name, position, and institution of each key team member and describe in 1-2 sentences the skills and experience they bring to the project.
   b. List the roles and responsibilities of the organizations and key personnel that make up the team, highlighting how they will contribute to the project.
   c. Required: Identify at least one member of the team to support on translation requirements for this program: market analysis, initial customer discovery, and preliminary patentability/freedom to operate analysis.
5. **Workforce Development**
   a. Provide a half-page description of existing or planned workforce development/education activities. You may use one of the examples provided on page 10 to inform your activities, or you may create something new.
   b. List any partners or staff that will commit to working with ReNEW staff to contribute to workforce goals.
   c. If postdocs or graduate students are included in the project, specify if you have a postdoc/graduate student mentoring plan or will you plan to utilize ReNEW's existing postdoc mentoring plan? Please note that separate plans are not required for postdocs or graduate students.The plan should, however, specify how different components of the mentoring program will be enacted for the two different types of researchers.
6. **Regional Engagement**
   a. Provide a half page maximum description of how your research activities will contribute to regional engagement, including a description of how your proposal impacts or engages people or places across the region of service. Please identify how your RD&T activities will impact one or more of ReNEW's Regional Engagement goals listed.
7. **Commercialization**
   a. Provide answers to the questions in the table below.
   b. Not to exceed 1 page maximum. This table is not counted against the concept paper page limit.

Question	**Applicant Response**
Q1. How does your technology compare to alternative, established, or emerging approaches?	

Q2. What are your anticipated products - both your technology product(s) and recovered resource products(?)	
Q3. Who is the anticipated customer of the technology? Of the recovered product(s)?	
Q4. List any industry partners identified and/or types of partners you may need help connecting with.	
Q5. What preliminary results do you have that support your approach?	
Q6. What is the anticipated business model for your solution?	
Q7. What is the anticipated pricing for your solution?	

8. **References**

Full Proposal

Length: Not to exceed 8 pages maximum. References, biographical sketches, budget, and letters of support will not be counted against the page limit.

Full Proposal Elements

1. **Project Description**
    a. Background
    b. Proposed Research Product/Solution
        i. For R&D projects, include the waste stream to be used in the project and/or target user of the technology
        ii. For R&D projects, please include the Technology Readiness Level (TRL) and Adoption Readiness Level (ARL) of the proposed technology or technologies.
    c. Goals & Objectives
        i. Provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes.

ii. Goals: One or several broad statements describing the primary purpose of the research project, addressing a significant scientific question or problem.
iii. Consider the available resources, timeframe, and technical limitations when setting objectives.

d. Translation Consideration: If your team does not have the following information, describe how your team will address these topics during the period of the grant including which team members will be responsible for translation efforts.
   i. Describe the envisioned product resulting from your technology, and the business model for bringing it to market.
   ii. Define your target market and size of market - including if possible TAM/SAM/SOM. Describe anticipated customers of both the technology and products recovered; list specific customers if known.
   iii. Explain the concept's potential to be disruptive compared to existing or emerging technologies and products, and strengths and weaknesses of your proposed product.
   iv. Describe your IP strategy. Explain any anticipated challenges to bringing your product to market including IP or regulatory issues.
   v. Describe the types of partners you need to progress your technology towards the market. If you have already identified and connected with partners, please list them and briefly describe their involvement.
e. Workforce Development (Half page minimum, 1 page maximum)
   i. Include a clear and concise description of technical skills and/or certifications that would prepare workers to engage with the technology being developed.
   ii. Outline any workforce development or STEM education initiatives that your institution or partnership is engaged with or plans to engage with, including (but not limited to) an internship program, K-12 classroom involvement, contributions to job shadowing or career exploration activities.
   iii. List any proposed partners and describe their role in contributing to workforce goals as described above.
   iv. If postdocs are included in the project, specify if you have a postdoc mentoring plan or will you plan to utilize ReNEW's existing postdoc mentoring plan?
f. Regional Engagement
   i. Provide a half page minimum, 1 page maximum, description of how your research activities will contribute to regional engagement, including a description of how your proposal impacts or engages people or places across the region of service. Please identify how your RD&T activities will impact one or more of ReNEW's Regional Engagement goals.
g. Intellectual Property
   i. See Intellectual Property section below for options.

   h. References
2. **Project Plan & Milestones**
   a. Include a table outlining the key milestones and deliverables.
   b. Include general timelines by quarters (Q1-Q8) along with milestones (i.e. Demonstrate XYZ result by Q2).
3. **Biographical Sketches**
   a. NSF style biosketches are encouraged
4. **Budget Request & Justification**
   a. Equipment purchases exceeding $10,000 are not allowed.
   b. Budget request & justification template available as part of the application in Amplifund.
5. **Letters of Support**
   a. 3-5 letters of support, not to exceed 5 maximum.

Intellectual Property

Funding recipients can choose to retain ownership of subject inventions instead of assigning the rights to the federal government by reporting their federally-funded research intellectual property activities to ReNEW.

As a condition of funding, ReNEW will require funding recipients to negotiate in good faith to grant ReNEW with royalty-bearing licensing rights to the subject invention for commercialization purposes. The Engine will negotiate commercial terms and anticipates providing royalties from licensing assignment to the funding recipient (owner).

Application Evaluation

Great Lakes ReNEW uses NSF **Merit Review Principles and Criteria** as a baseline for evaluation of all competitive funding opportunities. Additional opportunity-specific criteria relate to the intended purpose of each proposal call.

Applications will be reviewed by a panel of experts **external to the Engine.** These experts may be drawn from Great Lakes ReNEW's Advisory Committee (in formation), but they may also serve on an ad-hoc basis. All expert reviewers will provide conflict of interest statements and will be offered an honorarium for their service. Written reviews will be confidential to the Great Lakes ReNEW Management Team, but anonymized reviews will be provided to the submitting teams upon request.

Concept Paper Review

1. **Sufficiency Review.** Advisory Committee (and/or Advisory Committee approved reviewers) evaluate the concept papers for sufficiency and alignment with the goals and objectives of the RFP.
    a. **Alignment.** Fit with stated areas of interest / priorities / goals
    b. **Capability.** Overall capacity to carry out the project as described (team meets eligibility requirements, includes requisite partners; lead organization is equipped to deliver necessary expertise, resources)
    c. **Completeness.** All areas of the proposal are sufficiently detailed and described.
    d. **Integration**. Plan to integrate RD&T, Workforce, and Regional Engagement Goals
2. Advisory Committee (and/or Advisory Committee approved reviewers) make **Encourage/Discourage** recommendations as first stage to CEO, with inputs from staff.

Full Proposal Review

Advisory Committee (and/or Advisory Committee approved reviewers) evaluate the full proposals using the following principles and criteria. Following review, recommendations are made to ReNEW's CEO. With input from the ReNEW management team, the CEO approves final selection of awardees.

1. Merit Review Principles

- All ReNEW RD&T projects should be of the highest quality and have the potential to transform the frontiers of knowledge, and/or fill critical gaps to advance technologies needed to solve pressing water challenges.
- In the aggregate, ReNEW RD&T projects should contribute more broadly to achieving Engine goals. These goals may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of ReNEW RD&T funded projects should be based on appropriate metrics. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

2. Merit Review Criteria

All proposals are reviewed according to the following criteria:

1. **RD&T Project Vision and Scope**
    a. Alignment with ReNEW goals and RD&T priorities

   b. Leverage and contribution to the regional innovation ecosystem
   c. Clarity in identifying key RD&T areas, industries, & outcomes
   d. Team vision, feasibility & regional fit
   e. National leadership & competitiveness
   f. Integration of RD&T priorities and regional impact
2. **RD&T Project Implementation Plans**
   a. Clarity and articulation of use-inspired R&D and translation challenges
   b. Advancement of technology development and innovation
   c. Commercial opportunity and market understanding
   d. Plan for IP and data management
   e. Feasibility of project plan (goals, milestones, resources, and leveraging external support)
3. **Partnerships, Workforce Development, and Ecosystem Impacts**
   a. Key partners and stakeholders
   b. Team qualifications
   c. Workforce and education engagement
   d. Regional engagement strategies
   e. Leadership across the ReNEW region of service

Post-Award Terms and Conditions

- **Funding Contingency.** The issuance of awards through the RFP is subject to funding availability.
- **Progress Reports.** All awardees will be required to, at minimum, provide quarterly progress reports, annual reports, and a final report upon completion of the project.
- **Financial Administration.** Awardees must follow all applicable regulations in the Office of Management and Budget Uniform Guidance (2 CFR 200) for administration of Federal awards. Additional award-specific terms and conditions may also apply.
- **Conflict of Interest Policy.** Awardees must have an established conflict of interest policy for Federal awards. Awardees must disclose in writing any potential conflict of interest to the Federal awarding agency or pass-through entity in accordance with National Science Foundation policy.
- **Termination.** Sponsor reserves the right to terminate approved funding in the event of failure to initiate any project activities within 2 months of execution of award agreement; failure to meet progress milestones; failure to meet NSF-required required reporting criteria; or in the event of a material breach of the subrecipient agreement.