CLACKAMAS
WATER ENVIRONMENT SERVICES

GREGORY L. GEIST | DIRECTOR
Water Quality Protection
Surface Water Management
Wastewater Collection & Treatment

July 21, 2022

Board of County Commissioners
Clackamas County

Approval of Goods and Services Contract #6707 with Polydyne, Inc. for the delivery of water treatment polymer products. Contract Value is $4,995,000.00 through June 30, 2027. Funding is through WES Operation Funds. County General Funds are not involved. - *Procurement*

Purpose/Outcomes	Approval of Goods and Services Contract #6707 with Polydyne, Inc. for the delivery of water treatment polymer products. Contract Value is $4,995,000.00 through June 30, 2027. Funding is through WES Operation Funds. County General Funds are not involved. – Procurement.
Dollar Amount and Fiscal Impact	Maximum contract value is $4,995,000.00.
Funding Source	WES Operating Funds, County General Funds are not involved.
Duration	This contract shall be in effect through June 30, 2027.
Previous Board Action	Sent to Issues on July 19, 2022.
Strategic Plan Alignment	1. This project supports the County strategic plan to ensure safe, healthy and secure communities. WES does this by depositing processed clean healthy water back into the rivers for the community to use. 2. This project supports the WES strategic plan to provide Product Quality. The polymer that is being purchased is a critical part of essential processes, both dewatering and thickening, that enables us to meet or exceed full compliance with regulatory and reliability requirements and consistent with customer, public health, ecological, and economic needs.
Counsel Review	Date of Counsel Review: June 27, 2022. Name of County Counsel performing review: Amanda Keller.
Procurement Review	Was this item reviewed by Procurement? Yes.
Contact Person	Josh Clark, Operations Supervisor, 971-804-5792
Agreement No.	#6707

BACKGROUND:
Water Environment Services ('WES') require a supply of bulk and or tote polymer product delivery for centrifuge dewatering of approximately 3000 dry tons per year of mixed primary and waste-activated, anaerobically digested biosolids generally at 1.8-2.2% feed solids. The use of cationic polymer assists in the efficient treatment of the plants' solids. These solids are generated by either the 12-million gallons per day (MGD) average dry weather capacity Tri-City Water Pollution Control Plant (WPCP) which includes primary clarification, conventional and membrane bioreactor (MBR) activated sludge secondary treatment and anaerobic digestion of the solids; or the 10.5 million gallons per day (MGD) average dry weather capacity Kellogg Water Pollution Control Plant (WPCP) which includes primary clarification, conventional activated sludge secondary treatment and anaerobic digestion of the solids.

Additionally, WES uses a second cationic polymer delivered in totes for thickening waste activated sludge taken from the conventional secondary treatment process and is generally 0.5-1.5% solids,

used in either a Dissolved Air Floatation Thickener (DAFT), a Rotary Drum thickener, or Gravity belt thickeners.

The purchase of polymer is vital to the Districts' wastewater treatment process.

PROCUREMENT PROCESS:
This project was advertised in accordance with ORS and LCRB Rules on April 28, 2022, Through RFP 2022-34. Proposals were publicly opened on May 31, 2022. The County received one (1) Proposal in response to the RFP. After review of the Proposal1, contracting with Polydyne, Inc. A Corporation of Delaware, was determined to be in the best interest of the County based upon the scoring criteria outlined in RFP 2022-34.

RECOMMENDATION:
Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve and execute Goods and Services Contract with Polydyne, Inc. for the delivery of water treatment polymer products. Contract Value is $4,995,000.00 through June 30, 2027.

Respectfully submitted,

Ron Wierenga
Assistant Director
Water Environment Services

PROCUREMENT

COVER SHEET

☒ New Agreement/Contract

☐ Amendment/Change/Extension to _____

☐ Other _____

Originating County Department: Water Environment Services

Other party to contract/agreement: Polydyne

Description:

Approval of Goods and Services Contract #6707 with Polydyne, Inc. for the delivery of water treatment polymer products. Contract Value is $4,995,000.00 through June 30, 2027. Funding is through WES Operation Funds. County General Funds are not involved. – Procurement.

After recording please return to: Lauren Haney, WES

☐ County Admin

☒ Procurement

If applicable, complete the following:

Board Agenda Date/Item Number: _____

Clear Print

GOODS AND SERVICES CONTRACT
Contract #6707

This Goods and Services Contract (this "Contract") is entered into between **Polydyne, Inc. A Corporation of Delaware** ("Contractor"), and Water Environment Services, a political subdivision of the State of Oregon ("District"), for the purposes of providing **Water Treatment Polymer Products**.

I. TERM

This Contract shall become effective upon signature of both parties and shall remain in effect until **June 30, 2027**, with the option to renew for one (1) additional five (5) year term. This Contract and any amendments to this Contract will not be effective until approved in writing by an authorized representative of the Board of County Commissioners of Clackamas County acting as the Governing Body for the District. This Contract supersedes and cancels any prior contracts between the parties hereto for similar services.

II. SCOPE OF WORK

This Contract covers the Scope of Work as described in RFP 2022-34 Polymer Product Delivery For Centrifuge Dewatering, attached and hereby incorporated by reference as Exhibit "A." This Contract consists of the following documents which are listed in descending order of precedence and are attached and incorporated by reference, this Contract, Exhibit "A", and the Contractor's Proposal as Exhibit "B." Work shall be performed in accordance with a schedule approved by the District. The Contractor shall meet the highest standards prevalent in the industry or business most closely involved in providing the appropriate goods or services**.** The District Representative for this contract is: Josh Clark.

III. COMPENSATION

1. **PAYMENT**. The District agrees to compensate the Contractor on a time and material basis as detailed in this Contract. The annual estimated compensation under this Contract is $832,500, with the total Contract compensation not to exceed **Four Million Nine Hundred Ninety-Five Thousand Dollars ($4,995,000).**

2. **TRAVEL EXPENSE REIMBURSEMENT.** Authorized: ☐ Yes ☒ No
If travel expense reimbursement is authorized in this Contract, such expenses shall only be reimbursed at the rates in the Clackamas County Contractor Travel Reimbursement Policy, hereby incorporated by reference, in effect at the time of the expense is incurred.

3. **INVOICES.** Invoices submitted for payment in connection with this Contract shall be properly documented and shall indicate pertinent District contract and/or purchase order numbers. All charges shall be billed monthly (unless a different payment period is outlined in Exhibit A) and will be paid net thirty (30) days from receipt of invoice and shall be subject to Oregon Revised Statute ("ORS") 293.462. If Contractor fails to present invoices in proper form within sixty (60) calendar days after the end of the month in which the services were rendered, Contractor waives any rights to present such invoice thereafter and to receive payment therefor. Invoices shall be submitted to the District's Representative at: WES-Payables@clackamas.us

IV. CONTRACT PROVISIONS

1. ACCESS TO RECORDS. Contractor shall maintain books, records, documents, and other evidence and accounting procedures and practices sufficient to reflect properly all costs of whatever nature claimed

to have been incurred and anticipated to be incurred in the performance of this Contract. District and its duly authorized representatives shall have access to the books, documents, papers, and records of Contractor which are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Such books and records shall be maintained by Contractor for a minimum of six (6) years, or such longer period as may be required by applicable law, following final payment and termination of this Contract, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later.

2. AVAILABILITY OF FUNDS. District certifies that sufficient funds are available and authorized for expenditure to finance costs of this Contract within its current annual appropriation or expenditure limitation, provided, however, that continuation of this Contract, or any extension, after the end of the fiscal period in which it is written, is contingent on a new appropriation or limitation for each succeeding fiscal period sufficient in amount, in the exercise of the District's reasonable administrative discretion, to continue to make payments under this Contract.

3. CAPTIONS. The captions or headings in this Contract are for convenience only and in no way define, limit, or describe the scope or intent of any provisions of this Contract.

4. COMPLIANCE WITH APPLICABLE LAW. Contractor shall comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the work to be done under this Contract. Contractor specifically agrees to comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules, and regulations. Contractor shall also comply with the Americans with Disabilities Act of 1990 (Pub. L. No. 101-336), Title VI of the Civil Rights Act of 1964, Section V of the Rehabilitation Act of 1973, ORS 659A.142, and all regulations and administrative rules established pursuant to those laws. Contractor further agrees to make payments promptly when due, to all persons supplying to such Contractor, labor or materials for the prosecution of the work provided in this Contract; pay all contributions or amounts due the Industrial Accident Funds from such Contractor responsibilities incurred in the performance of this Contract; not permit any lien or claim to be filed or prosecuted against the District on account of any labor or material furnished; pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. If Contractor fails or refuses to make any such payments required herein, the appropriate District official may pay such claim. Any payment of a claim in the manner authorized in this section shall not relieve the Contractor or Contractor's surety from obligation with respect to unpaid claims. Contractor shall promptly pay any person or entity that furnishes medical care to Contractor's employees those sums which Contractor agreed to pay for such services and all money Contractor collected or deducted from employee's wages to provide such services.

5. EXECUTION AND COUNTERPARTS. This Contract may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

6. GOVERNING LAW. This Contract shall be governed and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law. Any claim, action, or suit between District and Contractor that arises out of or relates to the performance of this Contract shall be brought and conducted solely and exclusively within the Circuit Court for Clackamas County, for the State of Oregon. Provided, however, that if any such claim, action, or suit may be brought in a federal forum, it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon.

7. HAZARD COMMUNICATION. Contractor shall notify District prior to using products containing hazardous chemicals to which District employees may be exposed. Products containing hazardous chemicals are those products defined by Oregon Administrative Rules, Chapter 437. Upon District's request, Contractor shall immediately provide Material Safety Data Sheets for the products subject to this provision.

8. RESPONSIBILITY FOR DAMAGES; INDEMNITY. Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay which may be caused by, or result from, the conduct of work, or from any act, omission, or neglect of Contractor, its subcontractors, agents, or employees. The Contractor agrees to indemnify, hold harmless and defend the District and Clackamas County, and their officers, elected officials, agents and employees from and against all claims and actions, and all expenses incidental to the investigation and defense thereof, arising out of or based upon damage or injuries to persons or property caused by the errors, omissions, fault or negligence of the Contractor or the Contractor's employees, subcontractors, or agents.

However, neither Contractor nor any attorney engaged by Contractor shall defend the claim in the name of District or Clackamas County ("County"), purport to act as legal representative of District or County, or settle any claim on behalf of District or County, without the approval of the Clackamas County Counsel's Office. District or County may assume their own defense and settlement at their election and expense.

9. INDEPENDENT CONTRACTOR STATUS. The service(s) to be rendered under this Contract are those of an independent contractor. Although the District reserves the right to determine (and modify) the delivery schedule for the Work to be performed and to evaluate the quality of the completed performance, District cannot and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the work. Contractor is not to be considered an agent or employee of District for any purpose, including, but not limited to: (A) The Contractor will be solely responsible for payment of any Federal or State taxes required as a result of this Contract; (B) This Contract is not intended to entitle the Contractor to any benefits generally granted to the District employees, including, but not limited to, vacation, holiday and sick leave, other leaves with pay, tenure, medical and dental coverage, life and disability insurance, overtime, Social Security, Workers' Compensation, unemployment compensation, or retirement; and (C) If the Contractor has the assistance of other persons in the performance of this Contract, and the Contractor is a subject employer, the Contractor shall qualify and remain qualified for the term of this Contract as an insured employer under Oregon Revised Statutes ("ORS") Chapter 656.

10. INSURANCE. Insurance policies, which cannot be excess to a self-insurance program, are to be issued by an insurance company authorized to do business in the State of Oregon. Contractor shall provide insurance as indicated below:

A. **COMMERCIAL GENERAL LIABILITY**

The Contractor agrees to furnish the District evidence of commercial general liability insurance with a combined single limit of not less than $1,000,000 for each claim, incident, or occurrence, with an aggregate limit of $2,000,000 for bodily injury and property damage for the protection of the District and Clackamas County, and their officers, elected officials, agents, and employees against liability for damages because of personal injury, bodily injury, death or damage to property, including loss of use thereof, in any way related to this Contract. The general aggregate shall apply separately to this project / location. The District, at its option, may require a complete copy of the above policy.

B. **AUTOMOBILE LIABILITY**

The Contractor agrees to furnish the District evidence of business automobile liability insurance with a combined single limit of not less than $1,000,000 for bodily injury and property damage for the protection of the District and Clackamas County, and their officers, elected officials, agents, and employees against liability for damages because of bodily injury, death or damage to property, including loss of use thereof in any way related to this Contract. The District, at its option, may require a complete copy of the above policy.

C. Contractor shall provide District a certificate of insurance naming the District and Clackamas County, and their officers, elected officials, agents, and employees additional

insureds. If Contractor's insurance policy does not include a blanket endorsement for additional insured status when/where required by written contract (as required in this Contract), the insurance, shall include the District and Clackamas County and their agents, officers, and employees as expressly scheduled additional insured. Use CG 20 10 or its equivalent. Such insurance shall provide sixty (60) days written notice to the District in the event of a cancellation or material change and include a statement that no act on the part of the insured shall affect the coverage afforded to the District under this insurance. This policy(s) shall be primary insurance with respect to the District. Any insurance or self-insurance maintained by the District shall be excess and shall not contribute to it.

D. If the Contractor has the assistance of other persons in the performance of this Contract, and the Contractor is a subject employer, the Contractor agrees to qualify and remain qualified for the term of this Contract as an insured employer under ORS 656. The Contractor shall maintain employer's liability insurance with limits of $100,000 for each accident, $100,000 per disease for each employee, and $500,000 each minimum policy limit.

E. If any other required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of thirty-six (36) months or the maximum time period the Contractor's insurer will provide "tail" coverage as subscribed, whichever is greater, or continuous "claims made" liability coverage for thirty-six (36) months following the contract completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided it's retroactive date is on or before the effective date of this Contract.

F. There shall be no cancellation, material change, exhaustion of aggregate limits or intent not to renew insurance coverage without 60 days written notice by the Contractor to the District. This policy(s) shall be primary insurance with respect to the District. Any insurance or self-insurance maintained by the District shall be excess and shall not contribute to it.

G. Contractor shall require that all of its subcontractors of any tier provide insurance coverage (including additional insured provisions) and limits identical to the insurance required of the Contractor under this Contract, unless this requirement is expressly modified or waived by the District.

11. LIMITATION OF LIABILITIES. Except for liability arising under or related to Section 14 or 21(B), neither party shall be liable for (i) any indirect, incidental, consequential or special damages under this Contract or (ii) any damages of any sort arising solely from the termination of this Contact in accordance with its terms. This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent.

12. NOTICES. Except as otherwise expressly provided in this Contract, any communications between the parties hereto or notices to be given hereunder shall be given in writing by personal delivery, facsimile, or mailing the same, postage prepaid, to Contractor or District at the address or number set forth on the signature page of this Contract, or to such other addresses or numbers as either party may hereafter indicate. Any communication or notice so addressed and mailed shall be deemed to be given five (5) days after mailing. Any such communication or notice delivered by facsimile shall be deemed to be given when receipt of transmission is generated by the transmitting machine. To be effective against District, such facsimile transmission must be confirmed by telephone notice to District's supervising representative. Any communication or notice by personal delivery shall be deemed to be given when actually delivered.

13. OWNERSHIP OF WORK PRODUCT. All work product of Contractor that results from this Contract (the "Work Product") is the exclusive property of District. District and Contractor intend that such Work Product be deemed "work made for hire" of which District shall be deemed the author. If for

any reason the Work Product is not deemed "work for hire," Contractor hereby irrevocably assigns to District all of its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark or trade secret, or any other state or federal intellectual property law or doctrine. Contractor shall execute such further documents and instruments as District may reasonably request in order to fully vest such rights in the District. Contractor forever waives any and all rights relating to the Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.

14. REPRESENTATIONS AND WARRANTIES. Contractor represents and warrants to District that (1) Contractor has the power and authority to enter into and perform this Contract; (2) this Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; and (3) Contractor shall at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Work. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided.

A. Performance Warranty. Contractor warrants that the goods provided to the District shall consistently perform according to the performance characteristics described in the Scope of Work.

B. Service Warranty. Contractor warrants that the goods and services provided herein to the District, if any, will be delivered in a workmanlike manner and in accordance with the highest professional standards. The District agrees to provide Contractor reasonable access to the goods for purposes of repair or replacement under this Service Warranty. Failure of Contractor to promptly correct problems pursuant to this Service Warranty shall be deemed a material breach of this Contract.

15. SURVIVAL. All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Sections of Section IV: 1, 6, 8, 11, 13, 14, 15, 21, 22 and all other terms and conditions which by their context are intended to survive termination of this Contract.

16. SEVERABILITY. If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

17. SUBCONTRACTS AND ASSIGNMENTS. Contractor shall not enter into any subcontracts for any of the work required by this Contract, or assign or transfer any of its interest in this Contract, by operation of law or otherwise, without obtaining prior written approval from the District. In addition to any provisions the District may require, Contractor shall include in any permitted subcontract under this Contract a requirement that the subcontractor be bound by this section and Sections 1, 8, 13, 15, and 27 as if the subcontractor were the Contractor. District's consent to any subcontract shall not relieve Contractor of any of its duties or obligations under this Contract. District may assign all or part of this Contract at any time without further permission required to the Contractor. District may assign all or part of this Contract at any time without further permission required to the Contractor.

18. SUCCESSORS IN INTEREST. The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective authorized successors and assigns.

19. TAX COMPLIANCE CERTIFICATION. Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of this

Contract. Further, any violation of Contractor's warranty in this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Contract. Any violation shall entitle District to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to: (A) Termination of this Contract, in whole or in part; (B) Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to District's setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. District's shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement performance. These remedies are cumulative to the extent the remedies are not inconsistent, and District may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

The Contractor represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Contract, has faithfully complied with: (A) All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318; (B) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor; (C) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and (D) Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

20. TERMINATION. This Contract may be terminated for the following reasons: (A) This Contract may be terminated at any time by mutual consent of the parties, or by the District for convenience upon thirty (30) days' written notice to the Contractor; (B) District may terminate this Contract effective upon delivery of notice to Contractor, or at such later date as may be established by the District, if (i) federal or state laws, rules, regulations, or guidelines are modified, changed, or interpreted in such a way that either the work under this Contract is prohibited or the District are prohibited from paying for such work from the planned funding source; or (ii) any license or certificate required by law or regulation to be held by the Contractor to provide the services required by this Contract is for any reason denied, revoked, or not renewed; (C) This Contract may also be immediately terminated by the District for default (including breach of Contract) if (i) Contractor fails to provide services or materials called for by this Contract within the time specified herein or any extension thereof; or (ii) Contractor fails to perform any of the other provisions of this Contract or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms, and after receipt of notice from the District, fails to correct such failure within ten (10) business days; or (D) If sufficient funds are not provided in future approved budgets of the District (or from applicable federal, state, or other sources) to permit the District in the exercise of its reasonable administrative discretion to continue this Contract, or if the program for which this Contract was executed is abolished, District may terminate this Contract without further liability by giving Contractor not less than thirty (30) days' notice.

21. REMEDIES. (A) In the event of termination pursuant to Section 20(A), (B)(i), or (D), Contractor's sole remedy shall be payment for the goods and services delivered and accepted by the District, less previous amounts paid and any claim(s) which the District has against Contractor. If previous amounts paid to Contractor exceed the amount due to Contractor under Section 21(A), Contractor shall pay any excess to District on demand. (B) In the event of termination pursuant to Sections 20(B)(ii) or 20(C), the District shall have any remedy available to it in law or equity. If it is determined for any reason that Contractor was not in default under Sections 20(B)(ii) or 20(C), the rights and obligations of the parties shall be the same as if the Contract was terminated pursuant to Section 20(A). (C) Upon receiving a notice of termination of this Contract, Contractor shall immediately cease all activities under this

Contract, unless District expressly directs otherwise in such notice of termination. Upon termination of this Contract, Contractor shall deliver to District all documents, information, works-in-progress and other property that are or would be deliverables had the Contract work been completed. Upon District's request, Contractor shall surrender to anyone District designates, all documents, research or objects or other tangible things needed to complete the work.

22. NO ATTORNEY FEES. In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Contract, each party shall be responsible for its own attorneys' fees and expenses.

23. NO THIRD PARTY BENEFICIARIES. District and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

24. TIME IS OF THE ESSENCE. Contractor agrees that time is of the essence under this Contract.

25. FOREIGN CONTRACTOR. If the Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State, Corporate Division, all information required by those agencies relative to this Contract. The Contractor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.

26. FORCE MAJEURE. Neither District nor Contractor shall be held responsible for delay or default caused by fire, terrorism, riot, acts of God, or war where such cause was beyond, respectively, District's or Contractor's reasonable control. Contractor shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.

27. WAIVER. The failure of District to enforce any provision of this Contract shall not constitute a waiver by District of that or any other provision.

28. COMPLIANCE. Pursuant to the requirements of ORS 279B.020 and 279B.220 through 279B.235 and Article XI, Section 10, of the Oregon Constitution, the following terms and conditions are made a part of this Contract: (A) Contractor shall: (i) Make payments promptly, as due, to all persons supplying to the Contractor labor or materials for the prosecution of the work provided for in this Contract; (ii) Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of this Contract; (iii) Not permit any lien or claim to be filed or prosecuted against the District on account of any labor or material furnished. (B) If the Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a subcontractor by any person in connection with this Contract as such claim becomes due, the proper officer representing the District may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due the Contractor by reason of this Contract. (C) The Contractor shall pay employees for work in accordance with ORS 279B.020 and ORS 279B.235, which is incorporated herein by this reference. All subject employers working under the contract are either employers that will comply with ORS 656.017 or employers that are exempt under ORS 656.126. The Contractor shall comply with the prohibitions set forth in ORS 652.220, compliance of which is a material element of this Contract and failure to comply is a material breach that entitles District to exercise any rights and remedies available under this Contract including, but not limited to, termination for default. (D) The Contractor shall promptly, as due, make payment to any person or copartnership, association or corporation furnishing medical, surgical and hospital care or other needed care and

attention incident to sickness and injury to the employees of the Contractor, of all sums which the Contractor agrees to pay for such services and all moneys and sums which the Contractor collected or deducted from the wages of the Contractor's employees pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

29. DELIVERY. All deliveries shall be F.O.B. destination with all transportation and handing charges paid by the Contractor, unless specified otherwise in this Contract. Responsibility and liability for loss or damage shall remain with the Contractor until final inspection and acceptance, when responsibility shall pass to the District except as to latent defects, fraud and Contractor's warranty obligations.

30. INSPECTIONS. Goods and services furnished under this Contract will be subject to inspection and test by the District at times and places determined by the District. If the District finds goods and services furnished to be incomplete or not in compliance with the District, the District, at its sole discretion, may either reject the goods and services, require Contractor to correct any defects without charge, or negotiate with Contractor to sell the goods and services to the District at a reduced price, whichever the District deems equitable under the circumstances. If Contractor is unable or refuses to cure any defects within a time deemed reasonable by the District, the District may reject the goods and services and cancel the Contract in whole or in part. Nothing in this paragraph shall in any way affect or limit the District's rights as a Buyer, including the rights and remedies relating to rejection under ORS 72.6020 and revocation of acceptance under ORS 72.6080.

31. COOPERATIVE CONTRACTING. Pursuant to ORS 279A.200 to 279A.225, other public agencies may use this Contract resulting from a competitive procurement process unless the Contractor expressly noted in their proposal/quote that the prices and services are available to the District only. The condition of such use by other agencies is that any such agency must make and pursue contact, purchase order, delivery arrangements, and all contractual remedies directly with Contractor; the District accepts no responsibility for performance by either the Contractor or such other agency using this Contract. With such condition, the District consents to such use by any other public agency.

32. MERGER. THIS CONTRACT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE SUBJECT MATTER REFERENCED THEREIN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. CONTRACTOR, BY THE SIGNATURE HERETO OF ITS AUTHORIZED REPRESENTATIVE, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THIS CONTRACT AND CONTRACTOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

SIGNATURE PAGE FOLLOWS

By their signatures below, the parties to this Contract agree to the terms, conditions, and content expressed herein.

Polydyne Inc. A Corporation Of Delaware
1 Chemical Plant Rd.
Riceboro, GA 31323

07/01/2022

Authorized Signature — Date

Boyd Stanley — Sr. Vice President

Name / Title (Printed)

884268-96

Oregon Business Registry #

FBC/OR

Entity Type / State of Formation

Water Environment Services

Chair — Date

Recording Secretary

APPROVED AS TO FORM

Amanda Keller

Digitally signed by Amanda Keller
Date: 2022.07.05 17:45:56 -07'00'

County Counsel — Date

EXHIBIT A
RFP 2022-34

REQUEST FOR PROPOSALS #2022-34

FOR

POLYMER PRODUCT DELIVERY FOR CENTRIFUGE DEWATERING

BOARD OF COUNTY COMMISSIONERS
TOOTIE SMITH, Chair
SONYA FISCHER, Commissioner
PAUL SAVAS, Commissioner
MARK SHULL, Commissioner
MARTHA SCHRADER, Commissioner

Gary Schmidt
County Administrator

Thomas Candelario
Contract Analyst

PROPOSAL CLOSING DATE, TIME AND LOCATION

DATE: **May 31, 2022**

TIME: **2:00 PM, Pacific Time**

PLACE: **Procurement@clackamas.us**

SCHEDULE

Request for Proposals Issued……..... April 28, 2022

Protest of Specifications Deadline.....May 5, 2022, 5:00 PM, Pacific Time

Deadline to Submit Clarifying Questions.....May 12, 2022, 5:00 PM, Pacific Time

Request for Proposals Closing Date and Time……..... May 31, 2022, 2:00 PM, Pacific Time

Deadline to Submit Protest of Award..... Seven (7) days from the Intent to Award

Anticipated Contract Start Date…….....July 2022

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SECTION 1
NOTICE OF REQUEST FOR PROPOSALS

Notice is hereby given that Clackamas County through its Water Environment Services ("WES"), will receive sealed Proposals per specifications until **2:00 PM, May 31, 2022** ("Closing"), to provide Polymer Product Delivery For Centrifuge Dewatering. No Proposals will be received or considered after that time.

The resulting contract from this RFP require the successful proposer to begin contract on **July 1, 2022**

RFP Documents can be downloaded from the state of Oregon procurement website ("OregonBuys") at the following address https://oregonbuys.gov/bso/view/login/login.xhtml, Document No. S-C01010-000002980.

Prospective Proposers will need to sign in to download the information and that information will be accumulated for a Plan Holder's List. Prospective Proposers are responsible for obtaining any Addenda, clarifying questions, and Notices of Award from OregonBuys. Sealed Proposals are to be emailed to Clackamas County Procurement Services at procurement@clackamas.us.

Contact Information
Procurement Process and Technical Questions: Thomas Candelario, tcandelario@clackamas.us

The Board of County Commissioners reserves the right to reject any and all Proposals not in compliance with all prescribed public bidding procedures and requirements, and may reject for good cause any and all Proposals upon the finding that it is in the public interest to do so and to waive any and all informalities in the public interest. In the award of the contract, the Board of County Commissioners will consider the element of time, will accept the Proposal or Proposals which in their estimation will best serve the interests of Clackamas County and will reserve the right to award the contract to the contractor whose Proposal shall be best for the public good.

Clackamas County encourages proposals from Minority, Women, Veteran and Emerging Small Businesses.

SECTION 2
INSTRUCTIONS TO PROPOSERS

Clackamas County ("County") reserves the right to reject any and all Proposals received as a result of this RFP. County Local Contract Review Board Rules ("LCRB") govern the procurement process for the County.

2.1 Modification or Withdrawal of Proposal: Any Proposal may be modified or withdrawn at any time prior to the Closing deadline, provided that a written request is received by the County Procurement Division Director, prior to the Closing. The withdrawal of a Proposal will not prejudice the right of a Proposer to submit a new Proposal.

2.2 Requests for Clarification and Requests for Change: Proposers may submit questions regarding the specifications of the RFP. Questions must be received in writing on or before 5:00 p.m. (Pacific Time), on the date indicated in the Schedule, at the Procurement Division address as listed in Section 1 of this RFP. Requests for changes must include the reason for the change and any proposed changes to the requirements. The purpose of this requirement is to permit County to correct, prior to the opening of Proposals, RFP terms or technical requirements that may be unlawful, improvident or which unjustifiably restrict competition. County will consider all requested changes and, if appropriate, amend the RFP. No oral or written instructions or information concerning this RFP from County managers, employees or agents to prospective Proposers shall bind County unless included in an Addendum to the RFP.

2.3 Protests of the RFP/Specifications: Protests must be in accordance with LCRB C-047-0730. Protests of Specifications must be received in writing on or before 5:00 p.m. (Pacific Time), on the date indicated in the Schedule, or within three (3) business days of issuance of any addendum, at the Procurement Division address listed in Section 1 of this RFP. Protests may not be faxed. Protests of the RFP specifications must include the reason for the protest and any proposed changes to the requirements.

2.4 Addenda: If any part of this RFP is changed, an addendum will be provided to Proposers that have provided an address to the Procurement Division for this procurement. It shall be Proposers responsibility to regularly check OregonBuys for any notices, published addenda, or response to clarifying questions.

2.5 Submission of Proposals: Proposals must be submitted in accordance with Section 5. All Proposals shall be legibly written in ink or typed and comply in all regards with the requirements of this RFP. Proposals that include orders or qualifications may be rejected as irregular. All Proposals must include a signature that affirms the Proposer's intent to be bound by the Proposal (may be on cover letter, on the Proposal, or the Proposal Certification Form) shall be signed. If a Proposal is submitted by a firm or partnership, the name and address of the firm or partnership shall be shown, together with the names and addresses of the members. If the Proposal is submitted by a corporation, it shall be signed in the name of such corporation by an official who is authorized to bind the contractor. The Proposals will be considered by the County to be submitted in confidence and are not subject to public disclosure until the notice of intent to award has been issued.

No late Proposals will be accepted. Proposals submitted after the Closing will be considered late and will be returned unopened. Proposals may not be submitted by telephone or fax.

2.6 Post-Selection Review and Protest of Award: County will name the apparent successful Proposer in a Notice of Intent to Award published on OregonBuys. Identification of the apparent successful Proposer is procedural only and creates no right of the named Proposer to award of the contract. Competing Proposers shall be given seven (7) calendar days from the date on the Notice of Intent to Award to review the file at the Procurement Division office and file a written protest of award, pursuant to LCRB C-047-0740. Any award protest must be in writing and must be delivered by email, hand-delivery or mail to the address for the Procurement Division as listed in Section 1 of this RFP.

Only actual Proposers may protest if they believe they have been adversely affected because the Proposer would be eligible to be awarded the contract in the event the protest is successful. The basis of the written protest must be in accordance with ORS 279B.410 and shall specify the grounds upon which the protest is based. In order to be an adversely affected Proposer with a right to submit a written protest, a Proposer must be next in line for award, i.e. the protester must claim that all higher rated Proposers are ineligible for award because they are non-responsive or non-responsible.

County will consider any protests received and:

a. reject all protests and proceed with final evaluation of, and any allowed contract language negotiation with, the apparent successful Proposer and, pending the satisfactory outcome of this final evaluation and negotiation, enter into a contract with the named Proposer; OR
b. sustain a meritorious protest(s) and reject the apparent successful Proposer as nonresponsive, if such Proposer is unable to demonstrate that its Proposal complied with all material requirements of the solicitation and Oregon public procurement law; thereafter, County may name a new apparent successful Proposer; OR
c. reject all Proposals and cancel the procurement.

2.7 Acceptance of Contractual Requirements: Failure of the selected Proposer to execute a contract and deliver required insurance certificates within ten (10) calendar days after notification of an award may result in cancellation of the award. This time period may be extended at the option of County.

2.8 Public Records: Proposals are deemed confidential until the "Notice of Intent to Award" letter is issued. This RFP and one copy of each original Proposal received in response to it, together with copies of all documents pertaining to the award of a contract, will be kept and made a part of a file or record which will be open to public inspection. If a Proposal contains any information that is considered a **TRADE SECRET** under ORS 192.345(2), **SUCH INFORMATION MUST BE LISTED ON A SEPARATE SHEET CAPABLE OF SEPARATION FROM THE REMAINING PROPOSAL AND MUST BE CLEARLY MARKED WITH THE FOLLOWING LEGEND:**

"This information constitutes a trade secret under ORS 192.345(2), and shall not be disclosed except in accordance with the Oregon Public Records Law, ORS Chapter 192."

The Oregon Public Records Law exempts from disclosure only bona fide trade secrets, and the exemption from disclosure applies only "unless the public interest requires disclosure in the particular instance" (ORS 192.345). Therefore, non-disclosure of documents, or any portion of a document submitted as part of a Proposal, may depend upon official or judicial determinations made pursuant to the Public Records Law.

2.9 Investigation of References: County reserves the right to investigate all references in addition to those supplied references and investigate past performance of any Proposer with respect to its successful performance of similar services, its compliance with specifications and contractual obligations, its completion or delivery of a project on schedule, its lawful payment of subcontractors and workers, and any other factor relevant to this RFP. County may postpone the award or the execution of the contract after the announcement of the apparent successful Proposer in order to complete its investigation.

2.10 RFP Proposal Preparation Costs and Other Costs: Proposer costs of developing the Proposal, cost of attendance at an interview (if requested by County), or any other costs are entirely the responsibility of the Proposer, and will not be reimbursed in any manner by County.

2.11 Clarification and Clarity: County reserves the right to seek clarification of each Proposal, or to make an award without further discussion of Proposals received. Therefore, it is important that each Proposal be submitted initially in the most complete, clear, and favorable manner possible.

2.12 Right to Reject Proposals: County reserves the right to reject any or all Proposals or to withdraw any item from the award, if such rejection or withdrawal would be in the public interest, as determined by County.

2.13 Cancellation: County reserves the right to cancel or postpone this RFP at any time or to award no contract.

2.14 Proposal Terms: All Proposals, including any price quotations, will be valid and firm through a period of one hundred and eighty (180) calendar days following the Closing date. County may require an extension of this firm offer period. Proposers will be required to agree to the longer time frame in order to be further considered in the procurement process.

2.15 Oral Presentations: At County's sole option, Proposers may be required to give an oral presentation of their Proposals to County, a process which would provide an opportunity for the Proposer to clarify or elaborate on the Proposal but will in no material way change Proposer's original Proposal. If the evaluating committee requests presentations, the Procurement Division will schedule the time and location for said presentation. Any costs of participating in such presentations will be borne solely by Proposer and will not be reimbursed by County. **Note:** Oral presentations are at the discretion of the evaluating committee and may not be conducted; therefore, **written Proposals should be complete.**

2.16 Usage: It is the intention of County to utilize the services of the successful Proposer(s) to provide services as outlined in the below Scope of Work.

2.17 Review for Responsiveness: Upon receipt of all Proposals, the Procurement Division or designee will determine the responsiveness of all Proposals before submitting them to the evaluation committee. If a Proposal is incomplete or non-responsive in significant part or in whole, it will be rejected and will not be submitted to the evaluation committee. County reserves the right to determine if an inadvertent error is solely clerical or is a minor informality which may be waived, and then to determine if an error is grounds for disqualifying a Proposal. The Proposer's contact person identified on the Proposal will be notified, identifying the reason(s) the Proposal is non-responsive. One copy of the Proposal will be archived and all others discarded.

2.18 RFP Incorporated into Contract: This RFP will become part of the Contract between County and the selected contractor(s). The contractor(s) will be bound to perform according to the terms of this RFP, their Proposal(s), and the terms of the Sample Contract.

2.19 Communication Blackout Period: Except as called for in this RFP, Proposers may not communicate with members of the Evaluation Committee or other County employees or representatives about the RFP during the procurement process until the apparent successful Proposer is selected, and all protests, if any, have been resolved. Communication in violation of this restriction may result in rejection of a Proposer.

2.20 Prohibition on Commissions and Subcontractors: County will contract directly with persons/entities capable of performing the requirements of this RFP. Contractors must be represented directly. Participation by brokers or commissioned agents will not be allowed during the Proposal process. Contractor shall not use subcontractors to perform the Work unless specifically pre-authorized in writing to do so by the County. Contractor represents that any employees assigned to perform the Work, and any authorized subcontractors performing the Work, are fully qualified to perform the tasks assigned to them, and shall perform the Work in a competent and professional manner. Contractor shall not be permitted to add on any fee or charge for subcontractor Work. Contractor shall provide, if requested, any documents relating to subcontractor's qualifications to perform required Work.

2.21 Ownership of Proposals: All Proposals in response to this RFP are the sole property of County, and subject to the provisions of ORS 192.410-192.505 (Public Records Act).

2.22 Clerical Errors in Awards: County reserves the right to correct inaccurate awards resulting from its clerical errors.

2.23 Rejection of Qualified Proposals: Proposals may be rejected in whole or in part if they attempt to limit or modify any of the terms, conditions, or specifications of the RFP or the Sample Contract.

2.24 Collusion: By responding, the Proposer states that the Proposal is not made in connection with any competing Proposer submitting a separate response to the RFP, and is in all aspects fair and without collusion or fraud. Proposer also certifies that no officer, agent, elected official, or employee of County has a pecuniary interest in this Proposal.

2.25 Evaluation Committee: Proposals will be evaluated by a committee consisting of representatives from County and potentially external representatives. County reserves the right to modify the Evaluation Committee make-up in its sole discretion.

2.26 Commencement of Work: The contractor shall commence no work until all insurance requirements have been met, the Protest of Awards deadline has been passed, any protest have been decided, a contract has been fully executed, and a Notice to Proceed has been issued by County.

2.27 Best and Final Offer: County may request best and final offers from those Proposers determined by County to be reasonably viable for contract award. However, County reserves the right to award a contract on the basis of initial Proposal received. Therefore, each Proposal should contain the Proposer's best terms from a price and technical standpoint. Following evaluation of the best and final offers, County may select for final contract negotiations/execution the offers that are most advantageous to County, considering cost and the evaluation criteria in this RFP.

2.28 Nondiscrimination: The successful Proposer agrees that, in performing the work called for by this RFP and in securing and supplying materials, contractor will not discriminate against any person on the basis of race, color, religious creed, political ideas, sex, age, marital status, sexual orientation, gender identity, veteran status, physical or mental handicap, national origin or ancestry, or any other class protected by applicable law.

2.29 Intergovernmental Cooperative Procurement Statement: Pursuant to ORS 279A and LCRB, other public agencies shall have the ability to purchase the awarded goods and services from the awarded contractor(s) under terms and conditions of the resultant contract. Any such purchases shall be between the contractor and the participating public agency and shall not impact the contactor's obligation to the County. Any estimated purchase volumes listed herein do not include other public agencies and County makes no guarantee as to their participation. Any Proposer, by written notification included with their Proposal, may decline to extend the prices and terms of this solicitation to any and/or all other public agencies. County grants to any and all public serving governmental agencies, authorization to purchase equivalent services or products described herein at the same submitted unit bid price, but only with the consent of the contractor awarded the contract by the County.

SECTION 3
SCOPE OF WORK

3.1. INTRODUCTION

Clackamas County, through it Water Environmental Services, is seeking Proposals from vendors to provide Polymer Product Delivery for Centrifuge Dewatering.

Please direct all Technical/Specifications or Procurement Process Questions to the indicated representative referenced in the Notice of Request for Proposals and note the communication restriction outlined in Section 2.19.

3.2 BACKGROUND

Water Environment Services ('WES') require a supply of bulk and or tote polymer product delivery for centrifuge dewatering of approximately 3000 dry tons per year of mixed primary and waste-activated, anaerobically digested biosolids generally at 1.8-2.2% feed solids. The use of cationic polymer assists in the efficient treatment of the plants' solids. These solids are generated by either the 12-million gallons per day (MGD) average dry weather capacity Tri-City Water Pollution Control Plant (WPCP) which includes primary clarification, conventional and membrane bioreactor (MBR) activated sludge secondary treatment and anaerobic digestion of the solids; or the 10.5 million gallons per day (MGD) average dry weather capacity Kellogg Water Pollution Control Plant (WPCP) which includes primary clarification, conventional activated sludge secondary treatment and anaerobic digestion of the solids.

Additionally, WES uses a second cationic polymer delivered in totes for thickening waste activated sludge taken from the conventional secondary treatment process and is generally 0.5-1.5% solids, used in either a Dissolved Air Floatation Thickener (DAFT), a Rotary Drum thickener, or Gravity belt thickeners.

The purchase of polymer is vital to the Districts' wastewater treatment process.

3.3. SCOPE OF WORK

3.3.1. Scope:

The successful vendor(s) shall provide dewatering polymer for WES as per the specifications provided within this Request for Proposal.

PRE-QUALIFIED POLYMERS

The following previously qualified Polymers represent products that have been field tested and approved for use by the District and will not require final trial testing prior to contract award:

- PolydyneWE-1756 (Cationic Polymer for Thickening)
- Polydyne WE-2120 (Cationic Emulsion Polymer for Dewatering)

The characteristics and performance of the proposed polymer product must be equivalent to or better than those previously qualified. While alternative products may be accepted, the apparent low proposer must successfully field test their product should they be chosen as the successful proposer to this RFP, prior to award of the contract.

See Attachment A – Final Trial Testing Information and Specifications for testing procedures and requirements.

GENERAL REQUIREMENT

Selected Polymer must meet the following requirements:

- The dewatering polymeric flocculants shall be delivered in liquid emulsion form readily soluble in water.
- The thickening polymeric flocculants shall be delivered in liquid emulsion form readily soluble in water.
- These polymers shall be in compliance with all applicable laws and regulations, including but not limited to relevant Air Quality Monitoring Board regulations and have no objectionable odor in the work environment. The liquid form and solution of the materials shall be nonflammable and noncorrosive. The District reserves the right to disqualify any product which in the opinion of WES poses a safety hazard, health hazard, or odor problem to treatment plant personnel.
- ANY EQUIPMENT BEYOND THE EXISTING DISTRICT EQUIPMENT, NEEDED TO STORE, MIX AND DISTRIBUTE THE POLYMER SHALL BE SUPPLIED AND INSTALLED BY THE PROPOSER ON A "NO CHARGE" BASIS TO THE DISTRICT.
- The dewatering and/or thickening polymer Proposer shall be responsible for supplying any additional equipment, beyond the existing District equipment, needed for the make-down and mixing of the polymer, including all installation labor and materials. Proposer must have backup equipment of equal or better capacity. The Proposer will be solely responsible for the maintenance of the equipment and be able to respond to equipment malfunctions within a 24-hour period of notification.

ESTIMATED QUANTITY

The following quantities are estimates of anticipated annual usage and are provided for informational purposes only. WES is not obligated to purchase specific quantities based on these estimates, as these quantities may vary depending on actual operating conditions and demands during the contract term. No price adjustments will be allowed as a result of an increase or a decrease in the quantity purchased.

Product - Polydyne WE-2120; 41% Active
Estimated Annual Usage – 350,000 Active lbs
Description/Usage - Cationic Emulsion Polymer for Dewatering

Product - Polydyne WE-1756; 35% Active
Estimated Annual Usage - 100,000 Active lbs
Description/Usage - Cationic Emulsion Polymer for Thickening

FINAL TRIAL TESTING

If the apparent low Proposer is bidding to supply a polymer that was not previously qualified, Final Trial Testing will be mandatory for the proposed product.

The Final Trial Testing must be completed per a mutually agreed upon schedule and must be scheduled in advance with District staff.

Please refer to Attachment A – Final Trial Testing and Specifications for complete information, instructions and requirements.

Final trial testing evaluation will be scored on closest to meeting specifications along with estimated annual cost impact.

SPECIFICATIONS

A. The vendor must be the manufacturer or be a certified representative of the product.
B. The vendor must be available for technical support five (5) days per week via telephone and be able to provide on-site support within two (2) days of a request for support.
C. The vendor's technical support personnel must be knowledgeable in the use of the vendor's product and in the use of centrifuges to dewater municipal sludge.
D. The vendor must be able to guarantee delivery of the polymer within fourteen (14) business days of order.
E. Product Description: organic polymer, a synthetic, high molecular weight, polyacrylamide manufactured specifically as a flocculent for application in wastewater treatment. The product must be in liquid form.
F. Vendor must supply spec sheet or product description/bulletin.

SPECIFICATION	PRODUCT REQUIREMENT
Physical Form	Free flowing, homogenous liquid product
Activity	High Activity (> 30%)
Charge Type	Cationic
Freeze Point	> 0 degrees F
Boiling Point	< 210 degrees F
Flash Point	>200 degrees F
SPECIFICATION	PRODUCT REQUIREMENT
Viscosity	50-20,000 CPS at 25 degrees C
pH	4 – 10 (non-corrosive)
Solubility	water soluble
Shelf Life	3 months (minimum)
Dissolving Rate	High
Order of Toxicity	Low
Packaging	Deliveries in returnable 275 gallon totes and bulk deliveries.

QUALITY CONTROL

All Proposers are required to submit with their bid a Certified Quality Analysis of the product offered. Such analysis is to be performed by an "independent third-party laboratory". The Proposer's chemical may be inspected and/or sampled before, during, or after any delivery and tested to confirm compliance

with all of the specifications. Persistent clogging, deliveries containing significant amounts of debris, and/or chemical not meeting the technical specifications will be considered to be deficiencies. If deficiencies are detected, the chemical will be rejected and the Proposer will be required to remove and replace any and all of the chemical and clean the associated tanks and piping that are contaminated by a delivery that is determined to be deficient, at no cost to WES. If the Proposer fails to remove and replace the deficient chemical in a timely manner after being notified of the problem, WES may remove and dispose of the contaminated chemical and clean the chemical storage tank or tanks and the associated piping all at the Proposer's expense. Payment for the delivered chemical will not be made until the defects are corrected and the chemical is properly replaced and accepted. Repeat failures to comply with the specifications must constitute grounds for termination of the contract.

HAZARDOUS MATERIAL REQUIREMENTS

Proposers must submit a Safety Data Sheet (SDS) for the product offered with the bid. The successful Proposer must provide a new SDS sheet for the chemical with the first delivery or if the SDS is modified during the contract term. All product containers provided should exhibit the Hazardous Material Identification System (HMIS) and/or the National Fire Protection Association (NFPA) labels/ratings on the containers.

LIQUID PROCESS FLOW INFORMATION

- Bar Screens, Grit removal
- Primary Clarifiers
- Secondary Treatment via Activated sludge / Diffused Air
- Secondary Clarification
- Chlorination/Dechlorination prior to Discharge
- Additional UV disinfection

SOLIDS PROCESS FLOW INFORMATION

Primary solids is thickened in the primary clarifiers and pumped to the anaerobic digesters for processing. Waste-activated solids from the secondary clarifiers and MBR is thickened by gravity belts and pumped to the anaerobic digesters for processing. Solids are processed through the anaerobic digesters operating in parallel and are dewatered by a centrifuge.

PRICE ADJUSTMENTS

Proposer(s) may request unit pricing changes (increase or decrease) twice a year between April 1-10 and November 1-10 of each year of the contract. Capped at 10% of unit price per available adjustment period. A request may not be submitted prior to November 2022.

- WES will reject requests not received during the above referenced request periods.
- WES' intent is to ensure that it is paying competitive market rates for products.

GENERAL TREATMENT INFORMATION

The dewatering testing will be performed on a GEA / Watermaster CF 6000 centrifuge and or an Andritz D5 centrifuge.

The thickening testing will be performed on the Daft unit and/or a gravity Belt Thickener.

3.3.3. Term of Contract:

The term of the contract shall be from the effective date through **June 30, 2027,** with the option for one (1) additional five (5) year renewals thereafter subject to the mutual agreement of the parties.

3.3.4 Sample Contract: Submission of a Proposal in response to this RFP indicates Proposer's willingness to enter into a contract containing substantially the same terms (including insurance requirements) of the sample contract identified below. No action or response to the sample contract is required under this RFP. Any objections to the sample contract terms should be raised in accordance with Paragraphs 2.2 or 2.3 of this RFP, pertaining to requests for clarification or change or protest of the RFP/specifications, and as otherwise provided for in this RFP. This RFP and all supplemental information in response to this RFP will be a binding part of the final contract.

The applicable Sample Goods & Services Contract, for this RFP can be found at https://www.clackamas.us/finance/terms.html.

Goods & Services Contract (unless checked, item does not apply)

The following insurance requirements will be applicable:

☒ Commercial General Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for Bodily Injury and Property Damage.

☒ Professional Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for damages caused by error, omission or negligent acts.

☒ Automobile Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence for Bodily Injury and Property Damage.

SECTION 4
EVALUATION PROCEDURE

4.1 An evaluation committee will review all Proposals that are initially deemed responsive and they shall rank the Proposals in accordance with the below criteria. The evaluation committee may recommend an award based solely on the written responses or may request Proposal interviews/presentations. Interviews/presentations, if deemed beneficial by the evaluation committee, will consist of the highest scoring Proposers. The invited Proposers will be notified of the time, place, and format of the interview/presentation. Based on the interview/presentation, the evaluation committee may revise their scoring.

Written Proposals must be complete and no additions, deletions, or substitutions will be permitted during the interview/presentation (if any). The evaluation committee will recommend award of a contract to the final County decision maker based on the highest scoring Proposal. The County decision maker reserves the right to accept the recommendation, award to a different Proposer, or reject all Proposals and cancel the RFP.

Proposers are not permitted to directly communicate with any member of the evaluation committee during the evaluation process. All communication will be facilitated through the Procurement representative.

4.2 Evaluation Criteria

Category	**Points available:**
Proposer's General Background and Qualifications	0-30
Scope of Work	0-30
Annual projected cost	0-40
Available points	**0-100**

4.3 Once a selection has been made, the County will enter into contract negotiations. If the selected proposer has submitted an alternate material other than those previously qualified in section 3.3.1 above, contract award will be contingent upon successfully field testing their product in accordance with Attachment A of this RFP, prior to award of the contract. Should the material fail to meet the standard outline the County will begin negotiations with the next highest scoring vendor.

During negotiation, the County may require any additional information it deems necessary to clarify the approach and understanding of the requested services.

Any changes agreed upon during contract negotiations will become part of the final contract. The negotiations will identify a level of work and associated fee that best represents the efforts required. If the County is unable to come to terms with the highest scoring Proposer, discussions shall be terminated and negotiations will begin with the next highest scoring Proposer. If the resulting contract contemplates multiple phases and the County deems it is in its interest to not authorize any particular phase, it reserves the right to return to this solicitation and commence negotiations with the next highest ranked Proposer to complete the remaining phases.

SECTION 5
PROPOSAL CONTENTS

5.1. Vendors must observe submission instructions and be advised as follows:

5.1.1. Complete Proposals must be mailed to the below address or emailed to Procurement@clackamas.us. The subject line of the email must identify the RFP title. Proposers are encouraged to contact Procurement to confirm receipt of the Proposal.

5.1.3. County reserves the right to solicit additional information or Proposal clarification from the vendors, or any one vendor, should the County deem such information necessary.

5.1.4. Proposal may not exceed a total of **20 pages** (single-sided), inclusive of all exhibits, attachments or other information.

Provide the following information in the order in which it appears below:

5.2. Proposer's General Background and Qualifications:

- Description of the firm.
- Description of providing similar services to public entities of similar size within the past five (5) years.
- Description of what distinguishes the firm from other firms performing a similar service.

5.3. Scope of Work

- Can the vendor provide expected delivery time for bulk product and small containers?
- Can vendor support be dispatched in less than 21 days of request?
- Address the requirements in section 3.3.1

5.4. Annual Project Costs

Costs should be on a time and material with a not to exceed fee basis. Fees should be sufficiently descriptive to facilitate acceptance of a Proposal. List the not-to-exceed amount you propose for the service.

Proposal Price:

The pricing provided in this section must include all charges, delivery, and equipment as specified in the Invitation for Bid. Pricing must also include all taxes and costs for documentation, permits and fees, as may be applicable. All equipment must be new and unused.

Item No.	Estimated Annual Qty.	Description	Unit Price (per gallon)	Unit Price (per pound)	Total Price
1	350,000 Active pounds	Dewatering Emulsion Polymer	$_____/gallon	$_____/pound	$_____
2	100,000 Active	Thickening Emulsion Polymer	$_____/gallon	$_____/pound	$_____

5.5. References

Provide at least three (3) references from clients your firm has served similar to the County in the past three (3) years, including one client that has newly engaged the firm in the past thirty-six (36) months and one (1) long-term client. Provide the name, address, email, and phone number of the references. Please note the required three references may not be from County staff, but additional references may be supplied.

5.6. Completed Proposal Certification (see the below form)

PROPOSAL CERTIFICATION
RFP #2022-34

Submitted by:_____

(Must be entity's full legal name, and State of Formation)

Each Proposer must read, complete and submit a copy of this Proposal Certification with their Proposal. Failure to do so may result in rejection of the Proposal. By signature on this Proposal Certification, the undersigned certifies that they are authorized to act on behalf of the Proposer and that under penalty of perjury, the undersigned will comply with the following:

SECTION I. OREGON TAX LAWS: As required in ORS 279B.110(2)(e), the undersigned hereby certifies that, to the best of the undersigned's knowledge, the Proposer is not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon Tax Laws" means the tax laws of the state or a political subdivision of the state, including ORS 305.620 and ORS chapters 316, 317 and 318. If a contract is executed, this information will be reported to the Internal Revenue Service. Information not matching IRS records could subject Proposer to 24% backup withholding.

SECTION II. NON-DISCRIMINATION: That the Proposer has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, gender identity, national origin, or any other protected class. Nor has Proposer or will Proposer discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emerging small business that is certified under ORS 200.055.

SECTION III. CONFLICT OF INTEREST: The undersigned hereby certifies that no elected official, officer, agent or employee of Clackamas County is personally interested, directly or indirectly, in any resulting contract from this RFP, or the compensation to be paid under such contract, and that no representation, statements (oral or in writing), of the County, its elected officials, officers, agents, or employees had induced Proposer to submit this Proposal. In addition, the undersigned hereby certifies that this proposal is made without connection with any person, firm, or corporation submitting a proposal for the same material, and is in all respects fair and without collusion or fraud.

SECTION IV. COMPLIANCE WITH SOLICITATION: The undersigned further agrees and certifies that they:

1. Have read, understand and agree to be bound by and comply with all requirements, instructions, specifications, terms and conditions of the RFP (including any attachments); and
2. Are an authorized representative of the Proposer, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the Proposal or contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the RFP and Proposal; and
4. Will use recyclable products to the maximum extend economically feasible in the performance of the contract work set forth in this RFP.

Name:_____ Date:_____

Signature:_____ Title:_____

Email:_____ Telephone:_____

Oregon Business Registry Number:_____ OR CCB # (if applicable):_____

Business Designation (check one):

☐ Corporation ☐ Partnership ☐ Sole Proprietorship ☐ Non-Profit ☐ Limited Liability Company

☐ Resident Quoter, as defined in ORS 279A.120

☐ Non-Resident Quote. Resident State:_____

ATTACHMENT A
FINAL TRIAL TESTING IMFORMATION & SPECIFICATIONS

NOTE: If the proposed product has not been previously qualified, the apparent low Proposer must perform a final trial field test to prove their product works as designated in the product application they proposer for.

PROPOSED POLYMER TRIAL SCHEDULE

The following is an estimated time-frame for testing, trials and evaluation. The District will establish appointments for testing based on the number of participants and equipment availability.

GENERAL INFORMATION

I. Trial Testing

The apparent low Proposer(s) will have:

- One product tested during the one-day final trial on (1) high-speed dewatering centrifuge
- One product tested during the one-day final trial on (1) thickening

II. Trial Products

The Proposer will be required to furnish, free of charge, enough polymer in totes for the full- scale final trial test on one (1) high speed centrifuge and (1) Daft unit and/or Gravity Belt Thickener, at least two (2) full days before the final trial date.

Any delays or revisions to the Trial schedule due to late polymer deliveries will be at the discretion of the District and are not guaranteed. Existing District polymer storage tanks will not be utilized for test purposes. Proposers will also be responsible for removal of all unused materials and containers within fourteen (14) calendar days after the field test. Failure to do so will result in the loss of the deposit required in **Section III. Shipments of Trial Products** below.

III. Shipments of Trial Products

Shipments of trial products will be accepted Monday through Friday 7:00 a.m. to 3:00 p.m. at the address below.
Prior notification of shipment shall be given to Darren Eki at (503) 557-2804 or Joshua Clark at (503) 794-8046.

For dewatering equipment testing:
Tri Cities Treatment facility
15941 S Agnes Ave.
Oregon City, OR 97045

For thickening equipment testing:
Kellogg Treatment facility
11525 SE McLoughlin BLVD.
Milwaukie, OR 97222

Product Specifications Sheets, QA/QC Documentation, Analytical Procedures AND Safety Data Sheets are required before the final trial commences. Vendors must ensure that WES is in possession of this documentation at least **5 business days** before the start of the designated final trial date. At minimum, one copy of each form of documentation should be emailed or delivered hard copy to the **Operations Contact: Darren Eki** Deki@clackamas.us , **Joshua Clark** JClark2@clackamas.us within this time period. This documentation shall additionally be **included as part of the final bid submittal**.

IV. Product Disqualification

The District reserves the right to disqualify any polymer prior to trials, or anytime thereafter, if it is determined that the product poses a safety or health hazard to plant personnel.

PERFORMANCE OF DEWATERING POLYMERIC FLOCCULANT

I. Conditions

1. Polymer will be diluted into stock solution and dosed in the sludge line before feeding the centrifuges (sludge-line feed). Centrifuge Operating Parameters, such as batch concentrations, polymer injection points or machine settings will not be changed during the final trial.
2. Upon request, available data concerning sludge characteristics over the last few months will be provided by WES, including: total solids, volatile solids, and other digester chemistry. Requests for data will be provided on a 72-hour turnaround. Contact Darren Eki at (503) 557-2804 to request data.
3. Trials will be conducted on a high speed Dewatering Centrifuge.
4. Sludge characteristics are as follows:

	Digested Sludge
Feed Solids Concentrations % Total solids, TS	1.5-2.5 %

	Waste Activated Sludge
Feed Solids Concentrations % Total solids, TS	0.5-1.5 %

II. Performance Criteria

Effectiveness of the polymeric flocculant at meeting the minimum performance standards as specified shall be demonstrated and determined by final trial tests on District equipment. Required performance standards are as follows.

Centrifuge		Dewatering
Cake (%TS) Minimum	High Speed	21.0%
Solids Recovery (%) Minimum		95%
Sludge Feed Rate (gpm)* setpoint	High Speed	150

Solids recovery will be calculated using the following equation:

Percent Solids Recovery = s (f-e) / f (s-e) x 100

- s = cake concentration, % total solids (TS)
- f = feed concentration, % total solids (TS)
- e = centrate concentration, % total suspended solids (TSS)
- lbs. of Active Polymer/Dry Ton = (Lbs of Polymer/Dry Tons)*41%
- Dry Tons = ((Centrifuge Feed Q*8.34*(f/100))/2000)

III. Post Bid Trial Test Format

1. After final bids are received, bids will be reviewed to meet specifications and low bid scheduled for performance testing.
2. Prior to the final trial test date Proposer will be required to indicate their starting polymer dose rate (active-pounds per dry tons solids) and machine settings preferences to be used on the day of final trial testing, per machine (centrifuge torque, polymer feed configuration: bowl-feed or sludge line-feed, and polymer concentration).
3. Proposer will have a maximum of eight (8) hours operating time to test the proposed polymer for the dewatering operation.
4. Proposer is allowed to test one (1) product in the trial. Each polymer will be evaluated based on solids recovery performance, dewatering cake dryness, and active pounds of polymer per dry ton.
5. One preliminary final trial sample of the sludge feed will be collected the week prior to the polymer final trial test. This sample will be analyzed by the WES personnel and the results provided to the Proposer before the final trial test starts. The results for feed solids (TS) will be used for setting polymer dose points.
6. WES reserves the right to test Incumbent polymer after each final trial test to compare Proposer products against the same condition of sludge in the wastewater plant.
7. WES personnel will perform all final trial tests, including machine operation settings, sampling, analyses, data recording, and calculations. Information obtained from the final trial tests will be used as a basis for determining the responsiveness of the bid.
8. Final bid determination will be evaluated by WES for each Proposer's ability to meet specification in the final trial.
9. A bid which proposes a product not meeting the required criteria will be considered non-responsive and will be rejected. The next apparent low Proposer will be chosen to begin final trial testing as described in this specification, unless they have bid a prequalified polymer.
10. In case of conflict, interpretations and calculations made WES personnel will govern.
11. Proposers will be limited to a maximum of two (2) representatives present during final trials.

IV. Test Procedure

1. The final trial tests will be conducted on one (1) high speed dewatering centrifuge to be chosen by WES.
2. WES will clean and prepare the designated centrifuge.
3. The final trial tests will be conducted in two (2) phases.
4. The first 2-hour phase will be used to establish and stabilize polymer and sludge feed rates. The Proposer shall be available to assist in all aspects of handling and feeding the polymer, setting and maintaining the sludge feed rate and conducting any informal sample analysis during this period.

5. The second phase will consist of a 6-hour final trial test. This second phase will begin when WES personnel is satisfied that machine and sludge conditions are within normal ranges and the polymer feed rate is established or at a maximum of 2 hours from the beginning of the first phase.
6. The centrifuges will be run at the specified sludge rate throughout the 6-hour test period. No dewatering centrifuge adjustments will be made during the 6- hour test period.
7. Only WES staff will adjust the polymer dose during the 6-hour final test phase. The Proposer will indicate the desired starting polymer dose rate, polymer concentration, and gravity belt thickener settings, and will only be altered as needed during the test, with the approval of WES staff.
8. Flow data will be collected on sludge feed and polymer dose at each of the eight discrete dose rates. Sludge Feed, Centrate, and Cake samples will be collected for each dose rate. Polymer samples will be collected at least once per polymer tote trialed.

V. Sampling, Analysis, and Data Collection

1. WES personnel will collect and analyze all samples. Contractors will have no access to official trial samples; split samples will be provided to the Contractor if requested in advance.
2. After each polymer dosage change, no samples will be collected for the first 30 minutes. Samples of sludge feed, cake and centrate will be collected after the minimum 30-minute interval. A total of 8 sample sets for the high speed centrifuge sludge, cake and centrate will be collected for each of the eight (8) discrete polymer dose rates. The samples for feed sludge and cake will be analyzed for total solids (TS) and the centrate for total suspended solids (TSS) by WES personnel.
3. Instantaneous readings of sludge feed rate and polymer solution feed rates will be recorded each half-hour. In addition, totalizer readings will be taken at the beginning and end of the 6-hour test period for sludge feed. Total neat polymer feed will also be measured.
4. A 250mL sample of neat polymer will be collected and analyzed by WES personnel for each tote used in the final trial test.

VI. Data Evaluation

1. WES personnel will calculate percent recovery and active pounds polymer per dry using District laboratory results for each interval of the 6-hour test.
2. Any polymer dosing rate in the final trial sample set, which meets or exceeds recovery and remains within the target dewatering sludge dryness range will be considered a qualifying dose rate.
3. Averages of cake TS, solids recovery and dosage data for the four (4) lowest qualifying dose rates on the high speed centrifuge will be used in determining whether the target active lbs of Polymer/ Dry Ton target was met.
4. The final trial test shall be considered valid if the final laboratory results for the sludge feed determine the above mentioned targets were met.

PERFORMANCE OF THICKENING POLYMERIC FLOCCULANT

I. Conditions

1. Polymer will be diluted into stock solution and dosed in the sludge line before feeding the DAFT unit or Gravity Belt Thicken. Machine settings, such as batch concentrations or machine settings, shall not be changed during the final trial.
2. Upon request, available data concerning sludge characteristics over the last few months will be provided by the District, including: total solids, SVI and pre-thickening polymer dosage rates. Requests for data will be provided on a 72-hour turnaround. Contact Darren Eki at (503)557-2804 or Joshua Clark at (503) 557-8046 to request data.
3. Trials will be conducted on a DAFT unit and/or Gravity Belt Thickener
4. Sludge characteristics are as follows:

	Activated Sludge
Feed Solids Concentrations % Total solids, TS	0.5 - 1.5 %

II. Performance Criteria

Effectiveness of the polymeric flocculant at meeting the minimum performance standards as specified shall be demonstrated and determined by final trial tests on WES equipment. Required performance standards are as follows.

Daft FLOT Thickener	WAS	Thickening
Cake (%TS) Minimum		5.5%
Solids Recovery (%) Minimum		95%
Sludge Feed Rate (gpm)* setpoint		150-200

*Feed rate is exclusive of polymer dose

Solids recovery will be calculated using the following equation:

Percent Solids Recovery = s (f-e) x 100 f (s-e)

s = cake concentration, % total solids (TS)

f = feed concentration, % total solids (TS)

e = filtrate concentration, % total suspended solids (TSS)

Lbs. of Active Polymer/Dry Ton = (Lbs of Polymer/Dry Tons)*35%

Dry Tons = ((Feed Q*8.34*(f/100))/2000)

III. Final Trial Test Format

1. After bid submission and award of contract, final trial tests will be conducted on the Proposer's polymer using WES equipment to demonstrate that proposed polymer would meet the required performance standards at the bid dosage rate.

2. Prior to the final trial test date Proposers will be required to indicate their starting polymer dose rate (active-pounds per dry tons solids) and machine settings preferences to be used on the day of final trial testing, per machine (belt speed, polymer feed).

Daft Thickener		Thickening
Cake (%TS) Minimum		5.5%
Solids Recover (%) Minimum		95%
Feed rate (gpm)* Minimum		200

4. Each Proposer will have a maximum of eight (8) hours operating time to test the proposed polymer for the thickening operation.
5. Each Proposer is allowed to test one (1) product in the final trial. Each polymer will be evaluated based on solids recovery performance, thickened cake dryness, and active pounds of polymer per dry ton.
6. One preliminary final trial sample of the sludge feed will be collected the week of the polymer final trial test. This sample will be analyzed by WES personnel and the results provided to the Proposer before the final trial test starts. The results for feed solids (TS) will be used for setting polymer dose points.
7. Incumbent polymer will be tested after each final trial test to compare Proposer products against the same condition of sludge in the wastewater plant.
8. WES personnel will perform all final trial tests, including machine operation settings, sampling, analyses, data recording, and calculations. Information obtained from the final trial tests will be used as a basis for determining the responsiveness of the bid.
9. Final bid determination will be evaluated by the District for each Proposer's ability to meet specification of final trial.
10. A bid which proposes a product not meeting the required criteria will be considered non-responsive and will be rejected. The next apparent low Proposer will be chosen to begin final trial testing as described in this specification, unless they have bid a prequalified polymer
11. In case of conflict, interpretations and calculations made WES will govern.
12. Proposers will be limited to a maximum of two (2) representatives present during final trials.

IV. Test Procedure

1. The final trial tests will be conducted on one (1) DAFT unit and/or Gravity Belt Thicker.
2. WES personnel will clean and prepare the designated DAFT thickener and/or Gravity Belt prior to testing.
3. The final trial tests will be conducted in two (2) phases.
4. The first 2-hour phase will be used to establish and stabilize polymer and sludge feed rates. The Proposer shall be available to assist in all aspects of handling and feeding the polymer, setting and maintaining the sludge feed rate and conducting any informal sample analysis during this period.
5. The second phase will consist of a 6-hour final trial test. This second phase will begin when WES is satisfied that machine and sludge conditions are within normal ranges and the polymer feed rate is established or at a maximum of 2 hours from the beginning of the first phase.

6. The thickening units will be run at the specified sludge rate throughout the 6- hour test period. Thickening unit adjustments will be made only as needed during the 6- hour test period.
7. Polymer dose rates can be adjusted over the course of the testing period as solids TS concentrations can vary.
8. Only WES staff will adjust the polymer dose during the 6-hour final test phase. The Proposer will indicate the desired starting polymer dose rate, polymer concentration, and gravity belt thickener settings, and will only be altered as needed during the test, with the approval of WES staff.
9. Sludge feed and polymer flow/dose data will collected during the final trial. Sludge feed, filtrate and cake samples will be collected over the final trial and analyzed by WES personnel.

V. Sampling, Analysis, and Data Collection

1. WES personnel will collect and analyze all samples. Contractors will have no access to official trial samples; split samples will be provided to the Contractor if requested in advance.
2. Samples of sludge feed, cake and filtrate will be collected over the course of the trial. The samples for cake will be analyzed for total solids (TS) and the sludge feed and filtrate for total suspended solids (TSS) by WES personnel.
3. Instantaneous readings of sludge feed rate and polymer solution feed rates will be recorded each half-hour. In addition, totalizer readings will be taken at the beginning and end of the 6-hour test period for sludge feed. Total neat polymer feed will also be measured.
4. A 250mL sample of neat polymer will be collected and analyzed by WES personnel for each tote used in the final trial test.

VII. Data Evaluation

1. WES personnel will calculate percent recovery and active pounds per dry ton for each interval of the 6-hour test
2. WES personnel will calculate the actual average neat polymer feed rate, in active pounds of delivered liquid polymer per dry ton of sludge based on the District laboratory analytical percent TS results, totalized sludge flow and the pounds of liquid polymer used during the test period.
3. Any polymer dosing rate in the final trial sample set, which meets or exceeds recovery and remains within the target dewatering sludge dryness range, will be considered a qualifying dose rate.
4. Averages of cake TS, solids recovery and dosage data for the four (4) lowest qualifying dose rates on the Thickening Unit will be used in determining whether the target active lbs of Polymer/ Dry Ton target was met.
5. The final trial test shall be considered valid if the final laboratory results for the sludge feed determine the above mentioned targets were met.

EXHIBIT B
CONTRACTOR'S PROPOSAL

SNF
WATER SCIENCE

polydyne.snf.com

May 26, 2022

Thomas Candelario, Contract Analyst
Clackamas County Procurement
Clackamas County Public Services Building
2051 Kaen Road
Oregon City, OR 97045

RE: Request for Proposals #2022-34

Mr. Candelario,

Thank you for the opportunity to participate in the above referenced request for proposal. Polydyne Inc. is a wholly owned subsidiary of SNF Holding Company (SNFHC). Polydyne Inc. is the largest supplier of water-soluble polymers to the municipal market in the United States. Polymers are manufactured in nine separate manufacturing facilities strategically placed across the United States. We are a fully integrated manufacturing company and produce several of our key raw materials. Polydyne Inc. is also the only polymer supplier that offers a full range of polymer i.e. powders, emulsions and solutions. Worldwide our company has been in operation for over 30 years.

Polydyne's exclusive charter is to be the direct marketing organization for all SNFHC produced products, to the municipal market, in the United States, particularly those requiring "Manufacturer Only".

The polymers that Polydyne Inc. intends to bid for this contract are manufactured at our Riceboro, GA facility. This facility is capable of producing in excess of 170,000 dry tons of emulsion polymer per year. The products for Clackamas County will be maintained in inventory at our Los Angeles facility.

Polydyne's Technical Sales Representative for this contract is Charles Scott. Mr. Scott has been in the water treatment industry in excess of eleven years. Mr. Scott's contact information is below.

Charles Scott, Technical Sales Representative
635 A Street
Creswell, OR 97426
Cell: (360) 931-5566
E-mail: charless@polydyneinc.com

If I may be of any further assistance, or if you have any questions, please contact me at (800) 848-7659 Option 2.

Boyd Stanley, Sr. Vice-President

PROPOSER INTRODUCTION

Polydyne Inc. has been exclusively a supplier to the municipal market for the water and wastewater treatment industry for its entire history of twenty-six years. During this time Polydyne Inc. has established itself as a leader in the water and wastewater treatment industry. Currently Polydyne Inc. supplies in excess of 2,000 municipalities in the United States. In addition to the customers provided on our reference list, a small listing of current emulsion customers is below.

City of Atlanta, GA
City of Dallas, TX
Gwinnett County, GA
JEA, FL
City of Memphis
Passaic Valley S.C., NJ
City of Santa Rosa, CA
City of Vermillion, OH
City of Baton Rouge, LA
Erie County, NY
City of Hartford, CT
City of Kalamazoo, MI
NYCDEP, NY
Quantico Marine Base, VA
City of Toledo, OH
City of West Palm Beach, VA
MWRD of Greater Chicago, IL
City of Fresno, CA
City of Independence, MO
LA Co. Sanitation District
City of Olathe, KS
City of Richmond, VA
City of Ukiah, CA
City of Yuma, AZ

Polydyne Inc. has a Sales and Service Staff of twenty-four professionals. Many of these individuals are degreed Chemical Engineers. Polydyne's field personnel are strategically placed throughout the United States to ensure that on-site technical assistance is readily available to our customers, if and when needed. Polydyne's sales force is supported by a large number of chemists working in our manufacturing facilities in the United States as well as those abroad. The sales representative for the Clackamas County is Mr. Charles Scott. Mr. Scott has been working in the Water and Wastewater Industry in excess of eleven years and has extensive experience with many different applications. Mr. Scott's contact information is below.

Charles Scott, Technical Sales Representative
635 A Street
Creswell, OR 97426
Cell: (360) 931-5566
E-mail: charless@polydyneinc.com

Mr. Scott works closely with the Regional Sales Manager for the Western United States, Mr. Rawlin Castro. Mr. Castro has been in the Water and Wastewater Treatment Industry for over twenty years. Mr. Castro's contact information is below.

Rawlin Castro, Regional Sales Manager
158 Granville Way
San Francisco, CA 94127
Cell: (415) 218-6089
E-mail: rcastro@polydyneinc.com

SCOPE OF WORK

As the current supplier of emulsion polymer to Clackamas County for use at the county's facilities, Polydyne Inc. is familiar with the County's facilities, applications, and quantities of polymer needed for this application. While these polymers are manufactured at our Riceboro, GA facility, they will be maintained in inventory at our Los Angeles, CA facility to ensure timely delivery to Clackamas County facilities. This product is packaged in totes containing 2,300 pounds of polymer. When these totes are empty, pickup can be arranged with Mauser Packaging Solutions. This service is prepaid by Polydyne Inc. The Product Bulletin and SDS for these polymers are attached to this proposal.

To ensure compliance with the proposal's technical support requirements, Polydyne has six field personnel located in the Western United States. This level of coverage will ensure that Polydyne Inc. can supply technical support on site within two days of request.

One slight exception to the proposals product specifications that Polydyne must point out is that Clarifloc emulsion polymers will not flash. This product characteristic provides a safer work environment.

Polydyne Inc. is keenly aware of the importance of polymer to the operation of municipal water and wastewater treatment facilities. To ensure an uninterrupted supply of polymer, Polydyne Inc. sources the necessary raw materials not produced at our facilities from multiple vendors. This redundancy ensures a strong supply chain even if one or more vendors are affected by accident, natural disaster, labor action, etc. Additionally, we apply this same redundancy to our carriers to ensure that delivery resources are available when our products need to be shipped, even if one or more carriers are affected by any adverse circumstances.

In the event that our manufacturing facility is affected by an accident, natural disaster, or other negative occurrence, inventory is maintained at our other eight domestic locations to supply in the short term. In addition to the inventory maintained domestically, additional production facilities are situated strategically across the globe. Redundancy is built into our system to provide our customers with peace of mind.

Polydyne Inc. does not carry Professional Liability Coverage since its role, as polymer supplier does not rise to a level that would make this type of coverage necessary. Traditionally, Professional Liability Coverage is carried by Physicians, Lawyers, and Engineers that provide and invoice for their expertise or opinion, whereas, suppliers and vendors provide and invoice for tangible products, such as a pound of polymer, as in this Request for Proposal.

REFERENCES

Western Lake Superior Sanitary District
2626 Courtland Street
Duluth, MN 55806
Contact: Samidha Junghare
Ph. (218) 740-0409
E-mail: **Samidha.Junghare@wlssd.com**
Contract Dates: 05/01/21 – 04/30/23
Contract Value: $712,000.00 per year

City of Cincinnati
1600 Gest Street
Cincinnati, OH 45202
Contact: Larry Scanlan
Ph. (513) 244-5178
E-mail: **Larry.Scanlan@cincinnati-oh.gov**
Contract Dates: 02/12/22 – 02/11/23
Contract Value: $2,000,000.00 per year

City of Atlanta
2440 Bolton Road, N.W.
Atlanta, GA 30335
Contact: Daniel Sabou
Ph. (404) 565-8903
E-mail: **DSabou@atlantaga.gov**
Contract Dates: 03/05/18 – 03/04/23
Contract Value: $674,325.00 per year

Los Angeles County Sanitation District
24501 South Figueroa St.
Whittier, CA 90601
Malika Jones, Process Engineer
Ph.: (310) 830-2400 Ext. 5249
E-mail: mjones@lacsd.org
Contract Dates: 03/05/18 – 02/28/23
Contract Value: $4,000,000.00 per year

Charles R. Scott

635 A Street, Creswell, OR 97426 (360) 931-5566 charless@polydyneinc.com

EMPLOYMENT HISTORY

2020 – Present Technical Sales Representative, SNF Polydyne Inc.

- Responsible for a four state sales territory with sales in 2021 of approximately $15M.
- Member of a six-person sales team that handles sales and customer support for the entire western United States.
- Managing an additional sales territory in Northern California until permanent sales representative can be hired (sales in 2021 of approximately $16M).
- Extensive knowledge of Clarifloc product line.
- Extensive experience in wastewater treatment and potable water applications.

2013-2020 Plant Foreman, SNF Chemtall, Riceboro, GA

- Managed multiple powder and emulsion production lines
- Extensive Emulsion and Powder production knowledge
- 4 ½ years as a Cationic Powders Foreman producing the majority of the Polydyne Powder
- 3 ½ year as Emulsion Production experience
- Lowered Emulsion inventory from over 1.6 million pounds to less than 200,000lbs
- Works well with other groups to keep finished product levels low from Planning, CSR, sales, logistics, applications to key account managers
- Managed a team of up to 5 salaried and 60 hourly employees on a 24/7 rotating shift
- Plant produced up to 6 million pounds per week of finished product
- Worked closely purchasing on all Emulsions packaging changes, upgrades, and inventory levels
- Highly involved in all aspects of personnel management from hiring, promoting, discipline to terminations
- Responsible plant safety and performance matrix
- Completing Lean Six Sigma Green belt certification
- Lead multiple Kaizen and Green belt projects per year
- Mentored many successful Kaizen and 5S events with subordinate supervisors each year
- Implemented countless innovative projects to improve Safety, Quality, Production and Efficiency
- SAFESTART Trainer Certified
- Certified by ABS consulting in root cause analysis

2011-2013 Shift Supervisor UH/UJ plant, SNF Chemtall, Riceboro, GA

- Routinely supervised 10-12 personnel in a Cationic powder plant
- Attended Kiazen Boot camp and conducted multiple Kaizen events
- Trained 247 personnel on site to include all of UH/UJ plant personnel in Electrical Classification
- Wrote process procedures on pregrinder blending and cleaning the dehumidifier strainers
- Developed training material for the Crown Pallet Jack and the Wesco Drum Grab
- No recordable injuries on shift as a supervisor
- Plant OST and EFF are at or above target year to date
- Product quality is well above the target for the year
- Developed the plant operator shift trade form
- Developed multiple operator standards of work
- Filled in for the EHS Superintendent on multiple occasions being responsible for the Safety of the site

2009- 2011 H-60 Aircraft General Repair Mechanic II, Plane Captain, CSC, HAAF, GA

- Performed reset operation on H-60 A/L/M aircraft
- Plane Captain is responsible for leading 8 personnel in the reset operations on H-60 A/L/M aircraft
- Troubleshoot malfunctions in aircraft structure, landing gear, flight surfaces and controls, anti-icing, pneudraulics, engines, auxiliary power unit, and ventilation and heating systems
- Applied professional technical expertise and guidance to solve complex problems by interpreting technical data such as blueprints or manufactures' manuals
- Interpreted manufactures' and aircraft maintenance manuals, service bulletins, technical data, engineering data, and other specifications to determine feasibility and method of repairing or replacing malfunctioning or damaged components

2009 Powder Packaging operator UL plant, Chemtall, Riceboro, GA

- Operated automated packaging equipment in a Chemical plant environment.

2003-2009 Shift Supervisor, Tronox Pigments (Savannah) Inc., GA

- Managed a progressive disciplinary system involving performance, attendance and annual evaluations for up to 15 people.
- Areas of responsibility included a Titanium Dioxide Chlorination, Oxidation, Dry Finishing, Sulfuric Acid, and a Steam Plants.
- Developed a Microsoft Excel spreadsheet to track and issue lot numbers for all dry Titanium Dioxide production.
- Reviewed and monitored Plant/State Environmental reporting, monitoring and mitigation equipment.
- Conducted daily safety toolbox meetings.
- Routinely made process and reaction adjustments to stay within both in-plant and customer specifications.
- Submitted and coordinated scheduled and unscheduled maintenance work orders to include ordering parts, verified Lock-out Tag-out, and signing safety work permits.
- Supervised day to day activities in a complex chemical process.
- Audited Time cards using an ADP E-Time system for a crew of up to 15 people on a by-weekly basis.
- One of only 2 people trained and authorized to make PLC ladder logic adjustments to delicate High Solids slurry processing equipment.
- Worked directly with engineering on both improvement projects and new equipment installation projects on numerous occasions.
- Participated in Lean 5S program and projects.
- Held multiple plant records in areas including production rates and first pass quality.
- Plant Equipment Responsible for included: Chlorinators, Boilers, Condensers, Cooling Towers, Chillers, Vibratory Classification Screens, Compressors, Reactors, Cyclones, Dryers, Chemical additions and ratios, Filters, Loading trucks and rail cars with Hazardous and Non-Hazardous chemicals, Heat Exchangers, Fluid Energy Mills, Bag Filter Houses, Fluidizing Valves, Blowers, Super heaters, Bulk and small bag packaging machines and high solids slurry dewatering equipment.

2002-2006 Packaging Technician, Tronox Pigments (Savannah) Inc., GA

- Repair, inspect, and operate packaging machines, automated palletizers, conveying systems and a Fanuc Robot.

- Operated and repaired Auger, Air fluidized, and turbine driven packaging equipment.
- Operated and repaired Orion, MSK, and Lantech stretch and shrink wrap machines.
- Operated forklift moving 1 ton pallets of pigments consisting of both small bags and super sacks.
- Packaging types included 1000KG, 500KG, 2000lbs, 1000lbs super sacks, 50lbs, and 55lbs small bags.

2002 Switchman and Engineer, Rail Link, Garden City, GA

- Performed Switchman and Engineer duties for the railroad at the Georgia Ports Authority.

1995-2001 UH-60 Blackhawk Helicopter Crew Chief/Flight Standardization Instructor U.S. Army

- Managed a flight training program for over 45 Crew Members and 5 Subordinate Flight Instructors.
- Managed a unit arms room maintaining accountability and security of over 150 weapons systems valued at over 250 thousand dollars.
- Successfully trained and qualified 24 enlisted crewmembers to an expert rating with the M60D machine gun during gunnery.
- Conducted a flight training program designed to train and evaluate personnel in Maintenance practices, Aero Medical Factors, In flight duties, Pre-flight and Post-Flight inspections, Passenger Safety briefings, In-flight emergency procedures, and Aviation Safety.
- Responsible for tracking and scheduling all required tasks throughout the progressive flight training program for all enlisted crewmembers.
- Accumulated over 700 accident free flight hours of which 350 hours where instruction and evaluation time and 150 hours of hostile environment Flight time.
- Frequently performed all scheduled and unscheduled maintenance on turbine engines, hydraulics, flight controls, sheet metal, electrical, and rotor systems and components.

TRAINING AND EDUCATION

2013	Microsoft Excel Basic (PST)
2012	Microsoft Power Point Basic and Advanced (PST)
	Leadership skills for the front line supervisor (Georgia Southern)
2009	Achieved a platinum level Georgia Work Ready certificate
2007	Behavioral Based Safety Coarse certificate
2005	HAZMAT Incident Command training, OSHA 29 CFR 1910.120(q)(6)(u)
	LEAN Manufacturing 5S training, Savannah, GA
2003	Confined Space Training, Savannah, GA OSHA 29 CFR 1910.146
	Hazardous Material Response Savannah, GA OSHA 29 CFR 1910.120
1999	Primary Leadership and Supervision Certificate, Ft. Hood, TX
1996-1998	Collage level courses work in Aerodynamics, Hydraulic Systems, Components and Plumbing, Non-destructive testing, and Aviation Accident Prevention
1995	Honor Graduate Blackhawk Helicopter repairer's course, Ft Eustis, VA

SUMMARY OF EXPERIENCE FOR RAWLIN CASTRO

The Polydyne representative responsible for the Northern California area is Rawlin Castro. Mr. Castro holds a B.S. degree in Chemical Engineering from the United States Military Academy at West Point. He has 20 years of experience in the flocculants industry. He is based in San Francisco, and is able to provide responsive on-site technical support to Oregon and the surrounding western states. He has strong application experience with Dewatering, Thickening, and Clarification in both wastewater and potable treatments plants across the western United States.

Mr. Castro manages, and is a member of a six-person technical sales staff located on the west coast. They can each provide additional technical support, if required.

Mr. Castro has completed our in-house polymer make-down systems training, and is a proficient and qualified instructor to conduct operator-level classes in flocculant optimization and screening testing. His expertise in polymer chemistry insures effective selection of alternative products to match seasonal water characteristic variations, and his active involvement with WEFTEC allows him to keep abreast of the latest technologies in the industry. Contact information for Mr. Castro is as follows:

Rawlin Castro, Western Regional Sales Manager

Address:	158 Granville Way San Francisco, CA 94127
Phone:	(415) 218-6089
Fax:	(912) 880-2078
E-Mail	rcastro@polydyneinc.com

CLACKAMAS COUNTY

Department of Finance
Elizabeth Comfort
Finance Director

Procurement & Contracting Services
Public Services Building
2051 Kaen Road, Oregon City, OR 97045

REQUEST FOR PROPOSALS #2022-34

POLYMER PRODUCT DELIVERY FOR CENTRIFUGE DEWATERING

ADDENDUM NUMBER 1

May 25, 2022

On April 28, 2022, Clackamas County ("County") published Request for Proposals #2022-34 ("RFP"). The County has found that it is in its interest to amend the RFP through the issuance of this Addendum #1. Except as expressly amended below, all other terms and conditions of the original RFP and subsequent Addenda shall remain unchanged.

1. The proposal price sheet found on page 12 of the RFP is hereby replace with the following:

Item No.	Estimated Annual Qty.	Description	Unit Price (per gallon)	Unit Price (per pound)	Total Price
1	350,000 pounds	Dewatering Emulsion Polymer Clarifloc WE-2120	$ 15.910 /gallon **	$ 1.850 /pound	$ 647,500.00
2	100,000 pounds	Thickening Emulsion Polymer Clarifloc WE-1756	$ 15.910 /gallon **	$ 1.850 /pound	$ 185,000.00
				TOTAL $	$ 832,500.00

*Please note the term "active" has been removed from the estimated annual quantities.

** Formula for price per gallon - $1.850/Lb. X 8.6 Lbs./Gal. = $15.910/Gal.

CLACKAMAS COUNTY

Department of Finance
Elizabeth Comfort
Finance Director

Procurement & Contracting Services
Public Services Building
2051 Kaen Road, Oregon City, OR 97045

Boyd Stanley, Sr. Vice-President

End of Addendum # 1

CLACKAMAS
COUNTY

REQUEST FOR PROPOSALS #2022-34

FOR

POLYMER PRODUCT DELIVERY FOR CENTRIFUGE DEWATERING

BOARD OF COUNTY COMMISSIONERS
TOOTIE SMITH, Chair
SONYA FISCHER, Commissioner
PAUL SAVAS, Commissioner
MARK SHULL, Commissioner
MARTHA SCHRADER, Commissioner

Gary Schmidt
County Administrator

Thomas Candelario
Contract Analyst

PROPOSAL CLOSING DATE, TIME AND LOCATION

DATE: May 31, 2022

TIME: 2:00 PM, Pacific Time

PLACE: Procurement@clackamas.us

SCHEDULE

Request for Proposals Issued..... April 28, 2022

Protest of Specifications Deadline..... May 5, 2022, 5:00 PM, Pacific Time

Deadline to Submit Clarifying Questions..... May 12, 2022, 5:00 PM, Pacific Time

Request for Proposals Closing Date and Time..... May 31, 2022, 2:00 PM, Pacific Time

Deadline to Submit Protest of Award..... Seven (7) days from the Intent to Award

Anticipated Contract Start Date..... July 2022

TABLE OF CONTENTS

SECTION 3
SCOPE OF WORK

3.1. INTRODUCTION

Clackamas County, through it Water Environmental Services, is seeking Proposals from vendors to provide Polymer Product Delivery for Centrifuge Dewatering.

Please direct all Technical/Specifications or Procurement Process Questions to the indicated representative referenced in the Notice of Request for Proposals and note the communication restriction outlined in Section 2.19.

3.2 BACKGROUND

Water Environment Services ('WES') require a supply of bulk and or tote polymer product delivery for centrifuge dewatering of approximately 3000 dry tons per year of mixed primary and waste-activated, anaerobically digested biosolids generally at 1.8-2.2% feed solids. The use of cationic polymer assists in the efficient treatment of the plants' solids. These solids are generated by either the 12-million gallons per day (MGD) average dry weather capacity Tri-City Water Pollution Control Plant (WPCP) which includes primary clarification, conventional and membrane bioreactor (MBR) activated sludge secondary treatment and anaerobic digestion of the solids; or the 10.5 million gallons per day (MGD) average dry weather capacity Kellogg Water Pollution Control Plant (WPCP) which includes primary clarification, conventional activated sludge secondary treatment and anaerobic digestion of the solids.

Additionally, WES uses a second cationic polymer delivered in totes for thickening waste activated sludge taken from the conventional secondary treatment process and is generally 0.5-1.5% solids, used in either a Dissolved Air Floatation Thickener (DAFT), a Rotary Drum thickener, or Gravity belt thickeners.

The purchase of polymer is vital to the Districts' wastewater treatment process.

3.3. SCOPE OF WORK

3.3.1. Scope:

The successful vendor(s) shall provide dewatering polymer for WES as per the specifications provided within this Request for Proposal.

PRE-QUALIFIED POLYMERS

The following previously qualified Polymers represent products that have been field tested and approved for use by the District and will not require final trial testing prior to contract award:

- PolydyneWE-1756 (Cationic Polymer for Thickening)
- Polydyne WE-2120 (Cationic Emulsion Polymer for Dewatering)

The characteristics and performance of the proposed polymer product must be equivalent to or better than those previously qualified. While alternative products may be accepted, the apparent low proposer must successfully field test their product should they be chosen as the successful proposer to this RFP, prior to award of the contract.

See Attachment A – Final Trial Testing Information and Specifications for testing procedures and requirements.

GENERAL REQUIREMENT

Selected Polymer must meet the following requirements:

- The dewatering polymeric flocculants shall be delivered in liquid emulsion form readily soluble in water.
- The thickening polymeric flocculants shall be delivered in liquid emulsion form readily soluble in water.
- These polymers shall be in compliance with all applicable laws and regulations, including but not limited to relevant Air Quality Monitoring Board regulations and have no objectionable odor in the work environment. The liquid form and solution of the materials shall be nonflammable and noncorrosive. The District reserves the right to disqualify any product which in the opinion of WES poses a safety hazard, health hazard, or odor problem to treatment plant personnel.
- ANY EQUIPMENT BEYOND THE EXISTING DISTRICT EQUIPMENT, NEEDED TO STORE, MIX AND DISTRIBUTE THE POLYMER SHALL BE SUPPLIED AND INSTALLED BY THE PROPOSER ON A "NO CHARGE" BASIS TO THE DISTRICT.
- The dewatering and/or thickening polymer Proposer shall be responsible for supplying any additional equipment, beyond the existing District equipment, needed for the make-down and mixing of the polymer, including all installation labor and materials. Proposer must have backup equipment of equal or better capacity. The Proposer will be solely responsible for the maintenance of the equipment and be able to respond to equipment malfunctions within a 24-hour period of notification.

ESTIMATED QUANTITY

The following quantities are estimates of anticipated annual usage and are provided for informational purposes only. WES is not obligated to purchase specific quantities based on these estimates, as these quantities may vary depending on actual operating conditions and demands during the contract term. No price adjustments will be allowed as a result of an increase or a decrease in the quantity purchased.

Product - Polydyne WE-2120; 41% Active
Estimated Annual Usage – 350,000 Active lbs
Description/Usage - Cationic Emulsion Polymer for Dewatering

Product - Polydyne WE-1756; 35% Active
Estimated Annual Usage - 100,000 Active lbs
Description/Usage - Cationic Emulsion Polymer for Thickening

FINAL TRIAL TESTING

If the apparent low Proposer is bidding to supply a polymer that was not previously qualified, Final Trial Testing will be mandatory for the proposed product.

The Final Trial Testing must be completed per a mutually agreed upon schedule and must be scheduled in advance with District staff.

Please refer to Attachment A – Final Trial Testing and Specifications for complete information, instructions and requirements.

Final trial testing evaluation will be scored on closest to meeting specifications along with estimated annual cost impact.

SPECIFICATIONS

A. The vendor must be the manufacturer or be a certified representative of the product.
B. The vendor must be available for technical support five (5) days per week via telephone and be able to provide on-site support within two (2) days of a request for support.
C. The vendor's technical support personnel must be knowledgeable in the use of the vendor's product and in the use of centrifuges to dewater municipal sludge.
D. The vendor must be able to guarantee delivery of the polymer within fourteen (14) business days of order.
E. Product Description: organic polymer, a synthetic, high molecular weight, polyacrylamide manufactured specifically as a flocculent for application in wastewater treatment. The product must be in liquid form.
F. Vendor must supply spec sheet or product description/bulletin.

SPECIFICATION	PRODUCT REQUIREMENT
Physical Form	Free flowing, homogenous liquid product
Activity	High Activity (> 30%)
Charge Type	Cationic
Freeze Point	> 0 degrees F
Boiling Point	< 210 degrees F
Flash Point	>200 degrees F
SPECIFICATION	PRODUCT REQUIREMENT
Viscosity	50-20,000 CPS at 25 degrees C
pH	4 – 10 (non-corrosive)
Solubility	water soluble
Shelf Life	3 months (minimum)
Dissolving Rate	High
Order of Toxicity	Low
Packaging	Deliveries in returnable 275 gallon totes and bulk deliveries.

QUALITY CONTROL

All Proposers are required to submit with their bid a Certified Quality Analysis of the product offered. Such analysis is to be performed by an "independent third-party laboratory". The Proposer's chemical may be inspected and/or sampled before, during, or after any delivery and tested to confirm compliance

with all of the specifications. Persistent clogging, deliveries containing significant amounts of debris, and/or chemical not meeting the technical specifications will be considered to be deficiencies. If deficiencies are detected, the chemical will be rejected and the Proposer will be required to remove and replace any and all of the chemical and clean the associated tanks and piping that are contaminated by a delivery that is determined to be deficient, at no cost to WES. If the Proposer fails to remove and replace the deficient chemical in a timely manner after being notified of the problem, WES may remove and dispose of the contaminated chemical and clean the chemical storage tank or tanks and the associated piping all at the Proposer's expense. Payment for the delivered chemical will not be made until the defects are corrected and the chemical is properly replaced and accepted. Repeat failures to comply with the specifications must constitute grounds for termination of the contract.

HAZARDOUS MATERIAL REQUIREMENTS

Proposers must submit a Safety Data Sheet (SDS) for the product offered with the bid. The successful Proposer must provide a new SDS sheet for the chemical with the first delivery or if the SDS is modified during the contract term. All product containers provided should exhibit the Hazardous Material Identification System (HMIS) and/or the National Fire Protection Association (NFPA) labels/ratings on the containers.

LIQUID PROCESS FLOW INFORMATION

- Bar Screens, Grit removal
- Primary Clarifiers
- Secondary Treatment via Activated sludge / Diffused Air
- Secondary Clarification
- Chlorination/Dechlorination prior to Discharge
- Additional UV disinfection

SOLIDS PROCESS FLOW INFORMATION

Primary solids is thickened in the primary clarifiers and pumped to the anaerobic digesters for processing. Waste-activated solids from the secondary clarifiers and MBR is thickened by gravity belts and pumped to the anaerobic digesters for processing. Solids are processed through the anaerobic digesters operating in parallel and are dewatered by a centrifuge.

PRICE ADJUSTMENTS

Proposer(s) may request unit pricing changes (increase or decrease) twice a year between April 1-10 and November 1-10 of each year of the contract. Capped at 10% of unit price per available adjustment period. A request may not be submitted prior to November 2022.

- WES will reject requests not received during the above referenced request periods.
- WES' intent is to ensure that it is paying competitive market rates for products.

GENERAL TREATMENT INFORMATION

The dewatering testing will be performed on a GEA / Watermaster CF 6000 centrifuge and or an Andritz D5 centrifuge.

The thickening testing will be performed on the Daft unit and/or a gravity Belt Thickener.

3.3.3. Term of Contract:

The term of the contract shall be from the effective date through **June 30, 2027,** with the option for one (1) additional five (5) year renewals thereafter subject to the mutual agreement of the parties.

3.3.4 Sample Contract: Submission of a Proposal in response to this RFP indicates Proposer's willingness to enter into a contract containing substantially the same terms (including insurance requirements) of the sample contract identified below. No action or response to the sample contract is required under this RFP. Any objections to the sample contract terms should be raised in accordance with Paragraphs 2.2 or 2.3 of this RFP, pertaining to requests for clarification or change or protest of the RFP/specifications, and as otherwise provided for in this RFP. This RFP and all supplemental information in response to this RFP will be a binding part of the final contract.

The applicable Sample Goods & Services Contract, for this RFP can be found at https://www.clackamas.us/finance/terms.html.

Goods & Services Contract (unless checked, item does not apply)

The following insurance requirements will be applicable:

☒ Commercial General Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for Bodily Injury and Property Damage. *

☒ Professional Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for damages caused by error, omission or negligent acts.

☒ Automobile Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence for Bodily Injury and Property Damage.

* Polydyne Inc. does not carry Professional Liability Coverage since its role as polymer supplier does not rise to a level that would make this type of coverage necessary. Traditionally, Professional Liability Coverage is carried by Physicians, Lawyers, and Engineers that provide and invoice for their expertise or opinion, whereas, suppliers and vendors provide and invoice for tangible products, such as a pound of polymer, as in this Request for Proposal.

PROPOSAL CERTIFICATION

RFP #2022-34

Submitted by: Polydyne Inc., A Delaware Corporation

(Must be entity's full legal name, and State of Formation)

Each Proposer must read, complete and submit a copy of this Proposal Certification with their Proposal. Failure to do so may result in rejection of the Proposal. By signature on this Proposal Certification, the undersigned certifies that they are authorized to act on behalf of the Proposer and that under penalty of perjury, the undersigned will comply with the following:

SECTION I. OREGON TAX LAWS: As required in ORS 279B.110(2)(e), the undersigned hereby certifies that, to the best of the undersigned's knowledge, the Proposer is not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon Tax Laws" means the tax laws of the state or a political subdivision of the state, including ORS 305.620 and ORS chapters 316, 317 and 318. If a contract is executed, this information will be reported to the Internal Revenue Service. Information not matching IRS records could subject Proposer to 24% backup withholding.

SECTION II. NON-DISCRIMINATION: That the Proposer has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, gender identity, national origin, or any other protected class. Nor has Proposer or will Proposer discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emerging small business that is certified under ORS 200.055.

SECTION III. CONFLICT OF INTEREST: The undersigned hereby certifies that no elected official, officer, agent or employee of Clackamas County is personally interested, directly or indirectly, in any resulting contract from this RFP, or the compensation to be paid under such contract, and that no representation, statements (oral or in writing), of the County, its elected officials, officers, agents, or employees had induced Proposer to submit this Proposal. In addition, the undersigned hereby certifies that this proposal is made without connection with any person, firm, or corporation submitting a proposal for the same material, and is in all respects fair and without collusion or fraud.

SECTION IV. COMPLIANCE WITH SOLICITATION: The undersigned further agrees and certifies that they:

1. Have read, understand and agree to be bound by and comply with all requirements, instructions, specifications, terms and conditions of the RFP (including any attachments); and
2. Are an authorized representative of the Proposer, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the Proposal or contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the RFP and Proposal; and
4. Will use recyclable products to the maximum extend economically feasible in the performance of the contract work set forth in this RFP.

Name: Boyd Stanley Date: 05/26/22

Signature: Boyd Stanley Title: Sr. Vice-President

Email: bids@polydyneinc.com Telephone: (800) 848-7659 Option 2

Oregon Business Registry Number: 884268-96 OR CCB # (if applicable): _____

Business Designation (check one):

☑ Corporation ☐ Partnership ☐ Sole Proprietorship ☐ Non-Profit ☐ Limited Liability Company

☐ Resident Quoter, as defined in ORS 279A.120

☑ Non-Resident Quote. Resident State: Georgia

SNF
POLYDYNE

CERTIFICATE OF ANALYSIS

Polydyne Inc.
3929 MEDFORD STREET

LOS ANGELES CA 90063

CUSTOMER NAME :
KELLOGG CREEK WATER RESOURCE RECOVERY

OA # : 1606292 - 1 - 1

WATER ENV 001

WATER ENVIRONMENT SERV.
15941 SOUTH AGNES AVE.
(503)557 2803
OREGON CITY OR 97045
UNITED STATES

POLYDYNE PRODUCT NAME : CLARIFLOC WE-1756

PURCHASE ORDER NR : 1464 **DATE : 05/02/2022**

AMOUNT : 13800 LB

	UNIT	SPECIFICATION	QUALITY CONTROL BATCH NUMBER RC22/6728M	QC TEST
BULK VISCOSITY	cps	300 - 2000	400	1010 A
NON VOLATILE SOLIDS	%	TBD	44.4	1050 A
UL BROOKFIELD VISCOSITY	cps	TBD	3.51	1019 A
RESIDUAL ACRYLAMIDE	ppm	0 - 999	50	1001 A

Date : 05/02/2022
Signature
Kimberly Fitch

If the # symbol appears in the QC-TEST column, then the data on that line is given for information only, and does not constitute a specification.
If ND appears in the result column, that means under the limit of detection.
For Personal Care ingredients, the generic name is corresponding to the INCI name.

SUP NR: OG-0098 REVISION: 04

SNF

POLYDYNE

CLARIFLOC WE-1756 POLYMER

PRINCIPAL USES

CLARIFLOC WE-1756 is a **very high** charge cationic polyacrylamide in emulsion form that is used as a flocculant in a wide variety of municipal wastewater treatment applications. It has been successfully applied in all liquid/solids separation systems including clarification, thickening, and dewatering.

TYPICAL PROPERTIES

Physical Form	Clear to Milky White Liquid
Cationicity	80 %
Active Polyacrylamide Min.	35.0%
Specific Gravity	1.01 - 1.05
Freezing Point	7 F. (-14 C.)
Density	8.5 - 8.6 Lb/Gal

PREPARATION AND FEEDING

CLARIFLOC WE-1756 is a single component emulsion polymer that must be pre-diluted in water before use. In most cases, this product should not be applied neat. One method for dilution is adding the neat polymer into the vortex of a mixed tank at a concentration between 0.25-1.0% polymer (0.5% is optimum) by weight. The polymer can also be injected through a number of commercially available systems that provide in-line mechanical mixing. The best feed systems use initial high energy mixing (>1000 rpm) for a short time (<30 sec) to achieve good dispersion followed by low energy mixing (<400 rpm) for a longer time (10-30 min). Polymer solutions should be aged for 15-60 minutes for best results. Solution shelf life is 8-16 hours.

MATERIALS OF CONSTRUCTION

Cross-linked polyethylene, fiberglass, stainless steel or lined steel are the preferred materials of construction for bulk tanks. Avoid natural rubber and Buna-N gaskets as these materials swell when placed in contact with neat polymer. Unlined mild steel, black iron, galvanized steel, copper or brass are not recommended in any part of the feed system. Stainless steel, Viton or Teflon are the best choices for pump heads. For feed lines, use PVC or reinforced Tygon tubing.

MANUFACTURING SPECIFICATIONS

Total Solids	TBD
Residual AcAm	< 1000 ppm
Neat Viscosity	300-2000 cPs
UL Viscosity	TBD

HANDLING AND STORAGE

Suggested in-plant storage life is 6 months in unopened drums. For best results, store at 50-80 F. Bulk tanks should be mixed by periodically recirculating the contents bottom to top. Bulk tanks can also be fitted with an agitator type mixer that reaches the bottom 2 feet of the tank. Drums and bins should be mixed very well before first use and weekly after that. Do not allow emulsion polymers to freeze. Should freezing occur, allow the product to thaw thoroughly in a heated area and mix well before attempting to use it. For spills of CLARIFLOC WE-1756, sprinkle vermiculite or equivalent absorbant over the spill area and sweep the material into approved chemical disposal containers. Do not spray water onto a spill because the resulting gel is very difficult to clean up.

SAFETY INFORMATION

CLARIFLOC WE-1756 is a mildly acidic product that can irritate the skin and eyes and should be handled accordingly. Gloves, goggles and apron are highly recommended. Anyone responsible for the procure-ment, use or disposal of this product should familiarize themselves with the appropriate safety and handling precautions involved. Such information is outlined in the **POLYDYNE** Material Safety Data Sheet. In the event of an emergency with this product, contact Chemtrec anytime day or night at (800) 424-9300.

SHIPPING

CLARIFLOC WE-1756 Polymer is shipped in 55 gallon drums containing 450 pounds net or in 275 gallon totes containing 2300 pounds net. Bulk quantities are also available.

ADDITIONAL INFORMATION

To place an order or obtain technical information from anywhere in the continental United States, call toll free:

(800) 848-7659

PRODUCT BULLETIN

For additional information, please refer to the Safety Data Sheet (SDS)

SNF POLYDYNE

SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: **CLARIFLOC™ WE-1756**

Type of product: Mixture.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Processing aid for industrial applications.

Uses advised against: None.

1.3. Details of the supplier of the safety data sheet

Company: Polydyne Inc.
1 Chemical Plant Road
PO BOX 279, Riceboro, GA 31323
United States

Telephone: 1-800-848-7659

Telefax: (912)-884-8770

E-mail address: -

1.4. Emergency telephone number

24-hour emergency number: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

Not classified.

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s):	None.
Signal word:	None.
Hazard statement(s):	None.
Precautionary statement(s):	None.

2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable, this product is a mixture.

3.2. Mixtures

Hazardous components

Distillates (petroleum), hydrotreated light

Concentration/ -range:	20 - 30%
CAS Number:	64742-47-8
Classification according to paragraph (d) of 29 CFR 1910.1200:	Asp. Tox. 1;H304

Notes
Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm²/s measured at 40°C.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Concentration/ -range:	< 5%
CAS Number:	69011-36-5
Classification according to paragraph (d) of 29 CFR 1910.1200:	Acute Tox. 4;H302, Eye Dam. 1;H318

Notes

For explanation of abbreviations see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Move to fresh air. No hazards which require special first aid measures.

Skin contact:
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Ingestion:
Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control centre immediately.

4.2. Most important symptoms and effects, both acute and delayed

None under normal use.

4.3. Indication of any immediate medical attention and special treatment needed

None reasonably foreseeable.

Other information:
None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water. Water spray. Foam. Carbon dioxide (CO2). Dry powder.
Warning! Spills produce extremely slippery surfaces.

Unsuitable extinguishing media:
None known.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products:
Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx). Ammonia (NH3). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3. Advice for firefighters

Protective measures:
Wear self-contained breathing apparatus and protective suit.

Other information:
Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:
Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

Protective equipment:
Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures:
Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

6.2. Environmental precautions

As with all chemical products, do not flush into surface water.

6.3. Methods and material for containment and cleaning up

Small spills:
Do not flush with water.Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills:
Do not flush with water.Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

Residues:
After cleaning, flush away traces with water.

6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Distillates (petroleum), hydrotreated light
ACGIH: 200 mg/m³ (8 hours) (vapors)

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment:

a) Eye/face protection:
Safety glasses with side-shields.

b) Skin protection:
i) Hand protection: PVC or other plastic material gloves.
ii) Other: Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur.

c) Respiratory protection:
No personal respiratory protective equipment normally required.

d) Additional advice:
Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance:	Viscous liquid, Milky.
b) Odour:	Aliphatic.
c) Odour Threshold:	No data available.
d) pH:	Not applicable.
e) Melting point/freezing point:	< 5°C
f) Initial boiling point and boiling range:	> 100°C

g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	2.3 kPa @ 20°C
l) Vapour density:	0.804 g/L @ 20°C
m) Relative density:	1.0 - 1.2 (See Technical Bulletin or Product Specifications for a more precise value, if available)
n) Solubility(ies):	Completely miscible.
o) Partition coefficient:	Not applicable.
p) Autoignition temperature:	Not applicable.
q) Decomposition temperature:	> 150°C
r) Viscosity:	> 20.5 mm^2/s @ 40°C
s) Explosive properties:	Not expected to be explosive based on the chemical structure.
t) Oxidizing properties:	Not expected to be oxidising based on the chemical structure.

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Oxidizing agents may cause exothermic reactions.

10.4. Conditions to avoid

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx). Ammonia (NH3). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 5000 mg/kg. (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Non-irritating to skin.
Serious eye damage/eye irritation:	Not irritating. (OECD 437)
Respiratory/skin sensitisation:	Not sensitizing.
Mutagenicity:	Not mutagenic.
Carcinogenicity:	Not carcinogenic.
Reproductive toxicity:	Not toxic for reproduction.
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	No known effect.
Aspiration hazard:	Due to the viscosity, this product does not present an aspiration hazard.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (OECD 401)
Acute dermal toxicity:	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
Acute inhalation toxicity:	LC0/inhalation/4 hours/rat >= 4951 mg/m³ (OECD 403) (Based on results obtained from tests on analogous products)
Skin corrosion/irritation:	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.
Serious eye damage/eye irritation:	Not irritating. (OECD 405)

Respiratory/skin sensitisation:	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
Mutagenicity:	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
Carcinogenicity:	Carcinogenicity study in rats (OECD 451): Negative.
Reproductive toxicity:	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days >= 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
Aspiration hazard:	May be fatal if swallowed and enters airways.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute oral toxicity:	LD50/oral/rat = 500 - 2000 mg/kg
Acute dermal toxicity:	LD50/dermal/rabbit > 2000 mg/kg
Acute inhalation toxicity:	No data available.
Skin corrosion/irritation:	Not irritating. (OECD 404)
Serious eye damage/eye irritation:	Causes serious eye irritation. (OECD 405)
Respiratory/skin sensitisation:	The results of testing on guinea pigs showed this material to be non-sensitizing.
Mutagenicity:	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Carcinogenicity:	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

Reproductive toxicity:	Based on available data, product is not expected to be toxic for reproduction. Two-Generation Reproduction Toxicity (OECD 416) - NOAEL/rat > 250 mg/kg/day Prenatal Development Toxicity Study (OECD 414) - NOAEL/Maternal toxicity/rat > 50 mg/kg/day - NOAEL/Developmental toxicity/rat > 50 mg/kg/day
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
Aspiration hazard:	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

Acute toxicity to fish:	LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
Acute toxicity to algae:	Algal inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute toxicity to fish:	LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
Acute toxicity to algae:	IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L. (OECD 201)

Chronic toxicity to fish:	NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1000 mg/L
Toxicity to microorganisms:	EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute toxicity to fish:	LC50/Cyprinus carpio/96 hours = 1 - 10 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC50/Daphnia/48 hours = 1 - 10 mg/L (OECD 202)
Acute toxicity to algae:	IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)
Toxicity to microorganisms:	EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

12.2. Persistence and degradability

Information on the product as supplied:

Degradation:	Based on degradation data of components, this product is expected to be readily (bio)degradable.
Hydrolysis:	At natural pHs (>6) the polymer degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms.
Photolysis:	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Degradation: Readily biodegradable. 67.6% / 28 days (OECD 301 F) ; 68.8% / 28 days (OECD 306) ; 61.2% / 61 days (OECD 304 A)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Degradation: Readily biodegradable. > 60% / 28 days (OECD 301 B)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): Not applicable.

Bioconcentration factor (BCF): No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Partition co-efficient (Log Pow): 3 - 6

Bioconcentration factor (BCF): No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Partition co-efficient (Log Pow): > 3

Bioconcentration factor (BCF): No data available.

12.4. Mobility in soil

Information on the product as supplied:

No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Koc: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Koc: > 5000

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

Store containers and offer for recycling of material when in accordance with the local regulations.

SECTION 14: Transport information

Land transport (DOT)

Not classified.

Sea transport (IMDG)

Not classified.

Air transport (IATA)

Not classified.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:
Not concerned.

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Not concerned.

Section 304 - Reportable Quantity:
Not concerned.

Section 313 (De minimis concentration):
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:
Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:
Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:
Not concerned.

RCRA status :

Not RCRA hazardous.

California Proposition 65 Information:

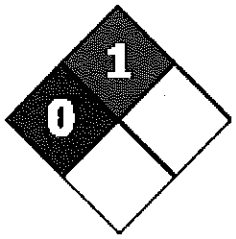
WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide

SECTION 16: Other information

NFPA and HMIS Ratings:

NFPA:

Health:	0
Flammability:	1
Instability:	0



HMIS:

Health:	0
Flammability:	1
Physical Hazard:	0
PPE Code:	B

This data sheet contains changes from the previous version in section(s):

SECTION 5. Fire-fighting measures, SECTION 8. Exposure controls/personal protection, SECTION 16. Other Information.

Key or legend to abbreviations and acronyms used in the safety data sheet:

Acronyms
STOT = Specific target organ toxicity

Abbreviations
Acute Tox. 4 = Acute toxicity Category Code 4
Asp. Tox. 1 = Aspiration hazard Category Code 1
Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

Hazard statements
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H318 - Causes serious eye damage

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 20.01.a

ENCC046

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SNF POLYDYNE

CERTIFICATE OF ANALYSIS

Polydyne Inc.
ONE CHEMICAL PLANT ROAD

RICEBORO GA 31323

CUSTOMER NAME :
WATER ENVIRONMENT SERVICES- TRI CITY

OA # : 1599824 - 1 - 1

WATER ENV 000

WATER ENVIRONMENT SERV.
15941 SOUTH AGNES AVE.
(503)557 2803
OREGON CITY OR 97045
UNITED STATES

POLYDYNE PRODUCT NAME : CLARIFLOC WE-2120

PURCHASE ORDER NR : T10918 **DATE : 04/26/2022**

AMOUNT : 25800 LB

			QUALITY CONTROL	QC
	UNIT	SPECIFICATION	BATCH NUMBER RC22/6943M	TEST
BULK VISCOSITY	cps	500 - 2000	800	1010 A
NON VOLATILE SOLIDS	%	45.5 - 52.5	47.1	1050 A
UL BROOKFIELD VISCOSITY	cps	3.10 - 3.90	3.71	1019 A
RESIDUAL ACRYLAMIDE	ppm	0 - 999	10	1001 A

Date : 04/26/2022
Signature
Mary Carter

If the # symbol appears in the QC-TEST column, then the data on that line is given for information only, and does not constitute a specification.
If ND appears in the result column, that means under the limit of detection.
For Personal Care ingredients, the generic name is corresponding to the INCI name.

SUP NR: OG-0098 REVISION: 04

SNF POLYDYNE

PRODUCT BULLETIN

CLARIFLOC WE-2120 POLYMER

PRINCIPAL USES

CLARIFLOC WE-2120 is a **very high** charge cationic polyacrylamide in emulsion form that is used as a flocculant in a wide variety of municipal wastewater treatment applications. It has been successfully applied in all liquid/solids separation systems including clarification, thickening, and dewatering.

TYPICAL PROPERTIES

Physical Form	Clear to Milky White Liquid
Cationicity	80 %
Active Polyacrylamide Min.	41.0%
Specific Gravity	1.02 - 1.03
Freezing Point	7 F. (-14 C.)
Density	8.5 - 8.6 Lb/Gal

PREPARATION AND FEEDING

CLARIFLOC WE-2120 is a single component emulsion polymer that must be pre-diluted in water before use. In most cases, this product should not be applied neat. One method for dilution is adding the neat polymer into the vortex of a mixed tank at a concentration between 0.25-1.0% polymer (0.5% is optimum) by weight. The polymer can also be injected through a number of commercially available systems that provide in-line mechanical mixing. The best feed systems use initial high energy mixing (>1000 rpm) for a short time (<30 sec) to achieve good dispersion followed by low energy mixing (<400 rpm) for a longer time (10-30 min). Polymer solutions should be aged for 15-60 minutes for best results. Solution shelf life is 8-16 hours.

MATERIALS OF CONSTRUCTION

Cross-linked polyethylene, fiberglass, stainless steel or lined steel are the preferred materials of construction for bulk tanks. Avoid natural rubber and Buna-N gaskets as these materials swell when placed in contact with neat polymer. Unlined mild steel, black iron, galvanized steel, copper or brass are not recommended in any part of the feed system. Stainless steel, Viton or Teflon are the best choices for pump heads. For feed lines, use PVC or reinforced Tygon tubing.

MANUFACTURING SPECIFICATIONS

Total Solids	45.5 - 52.5
Residual AcAm	< 1000 ppm
Neat Viscosity	500 - 2000 cPs
UL Viscosity	3.1 - 3.9

HANDLING AND STORAGE

Suggested in-plant storage life is 6 months in unopened drums. For best results, store at 50-80 F. Bulk tanks should be mixed by periodically recirculating the contents bottom to top. Bulk tanks can also be fitted with an agitator type mixer that reaches the bottom 2 feet of the tank. Drums and bins should be mixed very well before first use and weekly after that. Do not allow emulsion polymers to freeze. Should freezing occur, allow the product to thaw thoroughly in a heated area and mix well before attempting to use it. For spills of CLARIFLOC WE-2120, sprinkle vermiculite or equivalent absorbant over the spill area and sweep the material into approved chemical disposal containers. Do not spray water onto a spill because the resulting gel is very difficult to clean up.

SAFETY INFORMATION

CLARIFLOC WE-2120 is a mildly acidic product that can irritate the skin and eyes and should be handled accordingly. Gloves, goggles and apron are highly recommended. Anyone responsible for the procure-ment, use or disposal of this product should familiarize themselves with the appropriate safety and handling precautions involved. Such information is outlined in the **POLYDYNE** Material Safety Data Sheet. In the event of an emergency with this product, contact Chemtrec anytime day or night at (800) 424-9300.

SHIPPING

CLARIFLOC WE-2120 Polymer is shipped in 55 gallon drums containing 450 pounds net or in 275 gallon totes containing 2300 pounds net. Bulk quantities are also available.

ADDITIONAL INFORMATION

To place an order or obtain technical information from anywhere in the continental United States, call toll free:

(800) 848-7659

For additional information, please refer to the Safety Data Sheet (SDS)

SNF POLYDYNE

SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: **CLARIFLOC™ WE-2120**

Type of product: Mixture.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Processing aid for industrial applications.

Uses advised against: None.

1.3. Details of the supplier of the safety data sheet

Company: Polydyne Inc.
1 Chemical Plant Road
PO BOX 279, Riceboro, GA 31323
United States

Telephone: 1-800-848-7659

Telefax: (912)-884-8770

E-mail address: -

1.4. Emergency telephone number

24-hour emergency number: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

Not classified.

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s):	None.
Signal word:	None.
Hazard statement(s):	None.
Precautionary statement(s):	None.

2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable, this product is a mixture.

3.2. Mixtures

Hazardous components

Distillates (petroleum), hydrotreated light

Concentration/ -range:	20 - 30%
CAS Number:	64742-47-8
Classification according to paragraph (d) of 29 CFR 1910.1200:	Asp. Tox. 1;H304

Notes
Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm²/s measured at 40°C.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Concentration/ -range:	< 5%
CAS Number:	69011-36-5
Classification according to paragraph (d) of 29 CFR 1910.1200:	Acute Tox. 4;H302, Eye Dam. 1;H318

Notes

For explanation of abbreviations see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Move to fresh air. No hazards which require special first aid measures.

Skin contact:
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Ingestion:
Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control centre immediately.

4.2. Most important symptoms and effects, both acute and delayed

None under normal use.

4.3. Indication of any immediate medical attention and special treatment needed

None reasonably foreseeable.

Other information:
None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water. Water spray. Foam. Carbon dioxide (CO2). Dry powder.
Warning! Spills produce extremely slippery surfaces.

Unsuitable extinguishing media:
None known.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products:
Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx). Ammonia (NH3). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3. Advice for firefighters

Protective measures:
Wear self-contained breathing apparatus and protective suit.

Other information:
Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:
Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

Protective equipment:
Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures:
Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

6.2. Environmental precautions

As with all chemical products, do not flush into surface water.

6.3. Methods and material for containment and cleaning up

Small spills:
Do not flush with water.Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills:
Do not flush with water.Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

Residues:
After cleaning, flush away traces with water.

6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Distillates (petroleum), hydrotreated light
ACGIH: 200 mg/m³ (8 hours) (vapors)

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment:

a) Eye/face protection:
Safety glasses with side-shields.

b) Skin protection:
i) Hand protection: PVC or other plastic material gloves.
ii) Other: Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur.

c) Respiratory protection:
No personal respiratory protective equipment normally required.

d) Additional advice:
Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance:	Viscous liquid, Milky.
b) Odour:	Aliphatic.
c) Odour Threshold:	No data available.
d) pH:	Not applicable.
e) Melting point/freezing point:	< 5°C
f) Initial boiling point and boiling range:	> 100°C

g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	2.3 kPa @ 20°C
l) Vapour density:	0.804 g/L @ 20°C
m) Relative density:	1.0 - 1.2 (See Technical Bulletin or Product Specifications for a more precise value, if available)
n) Solubility(ies):	Completely miscible.
o) Partition coefficient:	Not applicable.
p) Autoignition temperature:	Not applicable.
q) Decomposition temperature:	> 150°C
r) Viscosity:	> 20.5 mm²/s @ 40°C
s) Explosive properties:	Not expected to be explosive based on the chemical structure.
t) Oxidizing properties:	Not expected to be oxidising based on the chemical structure.

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Oxidizing agents may cause exothermic reactions.

10.4. Conditions to avoid

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx). Ammonia (NH3). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 5000 mg/kg. (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Non-irritating to skin.
Serious eye damage/eye irritation:	Not irritating. (OECD 437)
Respiratory/skin sensitisation:	Not sensitizing.
Mutagenicity:	Not mutagenic.
Carcinogenicity:	Not carcinogenic.
Reproductive toxicity:	Not toxic for reproduction.
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	No known effect.
Aspiration hazard:	Due to the viscosity, this product does not present an aspiration hazard.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (OECD 401)
Acute dermal toxicity:	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
Acute inhalation toxicity:	LC0/inhalation/4 hours/rat >= 4951 mg/m³ (OECD 403) (Based on results obtained from tests on analogous products)
Skin corrosion/irritation:	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.
Serious eye damage/eye irritation:	Not irritating. (OECD 405)

Respiratory/skin sensitisation:	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
Mutagenicity:	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
Carcinogenicity:	Carcinogenicity study in rats (OECD 451): Negative.
Reproductive toxicity:	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days >= 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
Aspiration hazard:	May be fatal if swallowed and enters airways.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute oral toxicity:	LD50/oral/rat = 500 - 2000 mg/kg
Acute dermal toxicity:	LD50/dermal/rabbit > 2000 mg/kg
Acute inhalation toxicity:	No data available.
Skin corrosion/irritation:	Not irritating. (OECD 404)
Serious eye damage/eye irritation:	Causes serious eye irritation. (OECD 405)
Respiratory/skin sensitisation:	The results of testing on guinea pigs showed this material to be non-sensitizing.
Mutagenicity:	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Carcinogenicity:	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

Reproductive toxicity:	Based on available data, product is not expected to be toxic for reproduction. Two-Generation Reproduction Toxicity (OECD 416) - NOAEL/rat > 250 mg/kg/day Prenatal Development Toxicity Study (OECD 414) - NOAEL/Maternal toxicity/rat > 50 mg/kg/day - NOAEL/Developmental toxicity/rat > 50 mg/kg/day
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
Aspiration hazard:	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

Acute toxicity to fish:	LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
Acute toxicity to algae:	Algal inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute toxicity to fish:	LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
Acute toxicity to algae:	IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L. (OECD 201)

Chronic toxicity to fish:	NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1000 mg/L
Toxicity to microorganisms:	EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute toxicity to fish:	LC50/Cyprinus carpio/96 hours = 1 - 10 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC50/Daphnia/48 hours = 1 - 10 mg/L (OECD 202)
Acute toxicity to algae:	IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)
Toxicity to microorganisms:	EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

12.2. Persistence and degradability

Information on the product as supplied:

Degradation:	Based on degradation data of components, this product is expected to be readily (bio)degradable.
Hydrolysis:	At natural pHs (>6) the polymer degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms.
Photolysis:	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Degradation: Readily biodegradable. 67.6% / 28 days (OECD 301 F) ; 68.8% / 28 days (OECD 306) ; 61.2% / 61 days (OECD 304 A)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Degradation: Readily biodegradable. > 60% / 28 days (OECD 301 B)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): Not applicable.

Bioconcentration factor (BCF): No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Partition co-efficient (Log Pow): 3 - 6

Bioconcentration factor (BCF): No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Partition co-efficient (Log Pow): > 3

Bioconcentration factor (BCF): No data available.

12.4. Mobility in soil

Information on the product as supplied:

No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Koc: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Koc: > 5000

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

Store containers and offer for recycling of material when in accordance with the local regulations.

SECTION 14: Transport information

Land transport (DOT)

Not classified.

Sea transport (IMDG)

Not classified.

Air transport (IATA)

Not classified.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:
Not concerned.

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Not concerned.

Section 304 - Reportable Quantity:
Not concerned.

Section 313 (De minimis concentration):
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:
Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:
Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:
Not concerned.

RCRA status :

Not RCRA hazardous.

California Proposition 65 Information:

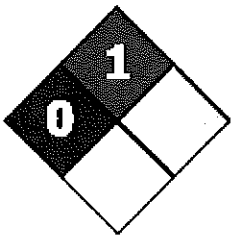
WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide

SECTION 16: Other information

NFPA and HMIS Ratings:

NFPA:

Health:	0
Flammability:	1
Instability:	0



HMIS:

Health:	0
Flammability:	1
Physical Hazard:	0
PPE Code:	B

This data sheet contains changes from the previous version in section(s):

SECTION 5. Fire-fighting measures, SECTION 8. Exposure controls/personal protection, SECTION 16. Other Information.

Key or legend to abbreviations and acronyms used in the safety data sheet:

Acronyms
STOT = Specific target organ toxicity

Abbreviations
Acute Tox. 4 = Acute toxicity Category Code 4
Asp. Tox. 1 = Aspiration hazard Category Code 1
Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

Hazard statements
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H318 - Causes serious eye damage

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 20.01.a

ENCC046

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.