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October 26, 2017

Via Certified Mail, Return Receipt Requested

Gary Wheeler, Mayor City of Medford 411 West 8th St. Medford, OR 97501

Dennis Baker, Manager Water Reclamation Division City of Medford 1100 Kirtland Road Central Point, OR 97502 Cory Crebbin, Director Public Works Department City of Medford 200 S. Ivy Street Medford, OR 97501

Lori Cooper, City Attorney City of Medford 411 West 8th Street Medford, OR 97501

Re: Sixty-Day Notice of Intent to Sue to Remedy Violations of the Clean Water Act, City of Medford, Waste Water Treatment Plant, Permit No. 100985

Dear Sirs and Madam:

Northwest Environmental Advocates ("NWEA") hereby provides notice, pursuant to Clean Water Act ("CWA" or the "Act") section 505(b), 33 U.S.C. § 1365(b), of its intent to file suit against the City of Medford ("Medford" or "City") in the United States District Court for the District of Oregon on or about the sixtieth day following the date of this letter to abate the CWA violations set forth below.

City of Medford 60-Day Notice Letter Page 1 of 14

A. Factual Background

Medford's Regional Water Reclamation Facility (the "Facility") is located at 1100 Kirtland Road, Central Point, Oregon 97502. The Facility is authorized to discharge pollutants to the Rogue River by National Pollutant Discharge Elimination System ("NPDES") Permit No. 100985 ("Permit"), issued by the Oregon Department of Environmental Quality ("DEQ") on December 13, 2011. Although the permit carries an expiration date of November 30, 2016, it remains in full force and effect due to Medford's timely submission of a renewal application.

NWEA was established in 1969, and its mission is to work through advocacy, education, and litigation to protect and restore water and air quality, wetlands, and wildlife habitat in the Northwest. NWEA has members who live, recreate, or work in the Rogue River watershed, including the segment of the river downstream from Medford's Facility that is routinely impacted by nuisance algae, depressed dissolved oxygen, objectionable odors and discoloration, and myriad other detrimental changes to water quality and native aquatic communities. The Facility's discharges contain excessive nutrient loadings and concentrations, materials with excessive chemical or biological oxygen demand, and other deleterious substances that contribute to these harmful impacts to the river and its ecosystem. These impacts, as well as the visible plume and scum from the outfall that extends downriver well beyond Medford's mixing zone, affect NWEA's members' aesthetic, recreational, employment, and spiritual enjoyment of the river.

The Rogue River flows more than 200 miles from near Crater Lake to the Pacific Ocean. The Rogue was one of the original eight rivers included in the Wild and Scenic Rivers Act of 1968. It supports an abundance of wildlife including black bears, river otters, black-tail deer, bald eagles, ospreys, salmon, great blue herons, and water ouzels among numerous other species. Designated uses of the Rogue Basin include wildlife & hunting, fishing, boating, water contact recreation, aesthetic quality, and fish & aquatic life. OAR 340-41-0271, Table 271A. Nearly all of the native fish species in the Rogue River basin have been identified as "species of concern" because of their depressed numbers, and coho salmon has been listed as threatened under the federal Endangered Species Act. Rogue River populations of spring Chinook are in precipitous decline.

The Medford Facility discharges treated effluent at mile 130.5 of the Rogue River. This section of the river is included on Oregon's list of "impaired waters" under CWA section 303(d) for inadequate dissolved oxygen from October 15 to May 15;

beneficial uses affected by this impairment include salmon and steelhead spawning. This section of the river is also shown to have exceeded DEQ's total phosphates as phosphorus "benchmark criterion" of 50 ug/L to control excessive aquatic growths in the summer; that DEQ lists waters exceeding this benchmark as Category 3B (Potential Concern) of its assessment does not negate these findings. The stream reach of the Rogue near the facility is designated to support salmonid spawning from mid-September to mid-June, and is designated by DEQ as core cold water habitat for fish use. OAR 340-41-0271, Figures 271A and 271B. "Core cold water habitat use" means waters expected to maintain temperatures within the range generally considered optimal for salmon and steelhead rearing, or that are suitable for bull trout migration, foraging and sub-adult rearing that occurs during the summer. OAR 340-041-0002(13). Anadromous salmonids use Rogue River near the Facility's outfall every month of the year; it serves as spawning, rearing, and migration habitat for spring Chinook, fall Chinook, and winter steelhead, and rearing and migration habitat for Coho and summer steelhead. Southern Oregon/Northern California Coast coho ("SONCC") also use this section of the Rogue River as habitat; SONCC coho are listed as threatened under the ESA, and the outfall location is within its critical habitat.

B. Legal Background

Section 301(a) of the CWA prohibits the "discharge of any pollutant" unless authorized by one of several permitting mechanisms, including NPDES permits issued by an authorized State under CWA section 402. Once regulated by a NPDES permit, dischargers must strictly comply with all of the terms and conditions of that permit, including narrative water quality standards incorporated therein. Violators are subject to enforcement actions initiated by EPA, states, and citizens. 33 U.S.C. §§ 1319, 1365(a).

Section 505 of the CWA authorizes citizens to bring suit against any person, including a municipality, who is alleged to be in violation of an effluent standard or limitation under the CWA. 33 U.S.C. § 1365(a). An effluent standard or limitation includes "a permit or condition thereof issued under section 1342[.]" 33 U.S.C. § 1365(f) (6). This citizen enforcement authority extends to narrative permit provisions requiring compliance with applicable water quality standards. *See Nw. Envtl. Advocates v. City of Portland*, 56 F.3d 979, 986 (9th Cir. 1995), *cert. denied*, 518 U.S. 1018 (1996).

Federal district courts have jurisdiction to enforce compliance with NPDES permit conditions through necessary injunctive relief, and to impose appropriate civil

penalties under Section 309(d) of the Act. 33 U.S.C. § 1365(a). Section 309(d) of the CWA, 33 U.S.C. § 1319(d), adjusted for inflation, provides for civil penalties of up to \$52,414 per day for violations that occurred after November 2, 2015 and assessed on or after January 15, 2017. 40 C.F.R. § 19.4, Table 2.

C. Alleged Clean Water Act Violations at Medford's Facility

1) Violations of Oregon's Narrative Biocriterion (OAR 340-041-0011)

The Facility's NPDES Permit states as follows:

No wastes may be discharged or activities conducted that cause or contribute to a violation of water quality standards in OAR 340-041 applicable to the Rogue Basin except as provided for in OAR 340-045-0080 and the [] regulatory mixing zone.

Permit at 5, Schedule A, Section 1.e. One of the water quality standards in OAR 340-041 is Oregon's narrative biocriterion, which is applicable state-wide, including the Rogue River. The relevant regulatory provision states:

Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities.

OAR 340-041-0011. The phrase "without detrimental changes in the resident biological community" means "no loss of ecological integrity when compared to natural conditions at an appropriate reference site or region," and "ecological integrity" means "the summation of chemical, physical, and biological integrity capable of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region." OAR 340-041-0002(19), (75). Finally, "aquatic species" means "plants or animals that live at least part of their life cycle in waters of the state." *Id.* § 340-041-0002(6).

As you are no doubt aware, a series of studies published in 2013 and 2014 found that the section of river immediately downstream of the Facility's outfall and outside of the mixing zone is suffering from significant growths of algae and loss of macroinvertebrate diversity as compared to sites upstream of the plant outfall. Further,

each of these three studies found that the effluent discharged from Medford's facility—in particular, that discharge's contribution of excess nutrients and materials of high biological and/or chemical oxygen demand—contributes to this loss of ecological integrity. From these documented changes, it is clear that the effluent discharged from Medford's Facility is contributing to a violation of the narrative biocriterion because the section of river downstream of the facility is not of "sufficient quality to support aquatic species without detrimental changes in the resident biological communities." OAR 340-041-0011.

First, in a January 2013 study entitled Medford Regional Water Reclamation FACILITY OUTFALL ASSESSMENT STUDY prepared by Rick Hafele for Rogue Fly Fishers & Federation of Fly Fishers, Mr. Hafele identified significant differences between algal growth in the Rogue River immediately upstream and downstream of the Facility's outfall. As compared to the upstream site, algal density downstream of the plant outfall at Lower Site 1 (0.4 miles below the outfall, beyond the outfall's 300-foot mixing zone) was 12.6 to 14.4 times higher. The total biovolume of periphyton (algae that is attached to the bottom of the stream) increased more than ten-fold at the lower sample sites as compared to the upper site. Mr. Hafele also found changes in species composition between the upper and lower sites indicating that the treatment plant outfall contributes significant nutrient inputs to the water. The Hafele study also revealed significant differences in the abundance and diversity of macroinvertebrates between the upstream sampling site and the downstream sites. Between the upstream sampling site and Lower Site 1, total abundance of invertebrates dropped over 400%, and between the upstream site and Lower Site 2, total abundance dropped over 200%. Mr. Hafele also found that taxa particularly sensitive to changes in water quality and habitat conditions (mayflies, stoneflies, and caddisflies) declined over 3,000% from upstream to Lower Site 1, and 500% from upstream to Lower Site 2. Mr. Hafele found a highly significant decrease in the percentage of sensitive macroinvertebrate species below the plant outfall, and a highly significant increase in the percent of tolerant species (aquatic worms and non-insect taxa like snails, clams, and crustaceans).

The purpose of Mr. Hafele's study was to assess the Facility's compliance with the Oregon biocriterion, and he concluded that:

Given the consistent and significant changes observed in composition, diversity, and abundance for both biological communities, this study confirms that the Medford wastewater discharge violated the biocriteria standard and its NPDES permit.

Second, in a September 2013 Technical Report entitled ROGUE RIVER ALGAE RECONAISSANCE: A RESPONSE TO THE ALGAE CONCERNS RELATED TO THE MEDFORD WWTP, Shannon Hubler, on behalf of DEQ, reached conclusions consistent with those of Mr. Hafele with respect to the biological conditions upstream and downstream of the Facility's outfall. DEQ's study scouted the mainstem Rogue and mouths of major tributaries upstream of the plant to identify whether similar conditions to those downstream of the plant existed elsewhere. DEQ found 90% aerial algal coverage 0.3 mile below the treatment plant outfall, and 40-50% coverage a mile downstream from it. The macrophyte (visible plant) density in the main channel below the plant outfall was higher than observed anywhere else in the Upper Reach or Lower Reach. The study did not find other sites in the 31 miles surveyed where macrophytes grew densely in the mid channel. While the DEQ study was "not intended to identify a biocriteria exceedance" below the Facility, DEQ nonetheless observed "obvious changes in macroinvertebrate and algal assemblages at the nearest site downstream from the [Facility], compared to not only the nearest upstream and next downstream sites, but also to any other site in the Upper or Lower Reaches observed during this study." DEQ concluded:

Given the similarities between the [Hafele and DEQ studies] and the quantitative nature of the results presented by Hafele, there is clear evidence of detrimental changes in the resident biological communities 0.3 miles below the [Facility]. These changes were represented by significant reductions in density, diversity, and sensitive macroinvertebrates. The signal of these changes appear to persist downstream to at least 1.0 miles below the [Facility's] outfall[.]

Finally, in an April 2014 study entitled Medford Regional Water Reclamation Facility: Mixing Zone and Biological Assessment Study, commissioned by the City of Medford and prepared by Brown & Caldwell, the authors generally agreed with the Hafele and DEQ studies. The Brown & Caldwell study primarily assessed the Facility's mixing zone, but also "(p) resents water quality and benthic macroinvertebrate/algae sample results to support evaluation of effluent impacts on ambient aquatic life populations and better understand the concerns raised by the third-party study submitted to DEQ (Hafele, 2013)." Brown & Caldwell found that at the two upstream riffles sampled, nitrogen-fixing algae contributed to a relatively large percentage of the total biovolume (but less of the total density), and that nitrogen fixers decreased sharply at the first riffle downstream of the plant outfall.

The Brown & Caldwell report also found that "[l]evels of DO were consistently higher upstream of the outfall [and] lowest near Riffle 3" and that total nitrogen and total phosphorus concentrations were consistently much higher immediately below the Facility's mixing zone than they were at the upstream monitoring location, concluding that "it appears likely that the effluent plume is discharging nutrient levels that could stimulate aquatic growth some distance from the [regulatory mixing zone] to the complete mix condition." Moreover, Brown & Caldwell stated that "the macroinvertebrate data indicate environmental impairment downstream of the outfall, with the most impairment at Riffle 4, the second riffle downstream."

To the extent the conclusions in the Brown & Caldwell report differed from the Hafele & DEQ reports regarding algae composition and abundance, it is likely due to a high flow event immediately before the field work used in the Brown & Caldwell study that "may have been high enough to scour some of the algae, leading to the differences seen between 2012 and 2013." Brown & Caldwell's data "suggest that the periphyton community downstream of the outfall is likely responding to nutrient enrichment, leading to greater density (but not greater biovolume) downstream of the outfall, and causing some shifts in the algal community" but the authors concede that "[t]he high river flow event 2 weeks prior to the sampling event could have reset the periphyton community partially and may explain some of the differences observed between Hafele's 2012 study and this study."

Taken together, the Hafele, DEQ, and Brown & Caldwell studies plainly indicate that the Facility's discharges have been and continue to contribute to violations of the narrative biocriterion in OAR 340-041-0011 because the discharges result in in-stream water quality that is not "of sufficient quality to support aquatic species without detrimental changes in the resident biological communities" outside of the mixing zone. Furthermore, Medford has not upgraded its Facility to reduce its pollutant discharges that are the root cause of these biocriterion exceedances since the three studies were completed. Subsequent field investigations conducted at NWEA's request during September 2017 indicate that the water immediately below the Facility's outfall continues to violate the narrative biocriterion in substantially the same manner as described in the prior three studies.

Therefore, NWEA alleges that these violations have occurred on each date upon which the Facility had a discharge to the Rogue River at least since October 10, 2012, the date of the first sampling referenced in the Hafele study. These violations will continue indefinitely into the future unless and until a court orders Medford to fully

comply with its NPDES permit and the Clean Water Act.

2. Violations of Oregon's Statewide Narrative Criteria (OAR 340-041-0007)

Other Oregon's water quality standards in OAR 340-041 applicable to the Rogue Basin are the following statewide narrative criteria:

- (9) The development of fungi or other growths having a deleterious effect on stream bottoms, fish or other aquatic life, or that are injurious to health, recreation, or industry may not be allowed;
- (10) The creation of tastes or odors or toxic or other conditions that are deleterious to fish or other aquatic life or affect the potability of drinking water or the palatability of fish or shellfish may not be allowed;
- (11) The formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life or injurious to public health, recreation, or industry may not be allowed;
- (12) Objectionable discoloration, scum, oily sheens, or floating solids, or coating of aquatic life with oil films may not be allowed;
- (13) Aesthetic conditions offensive to the human senses of sight, taste, smell, or touch may not be allowed;

OAR 340-041-0007(9)-(13). NWEA alleges that the Facility has violated these statewide narrative criteria on numerous occasions and in multiple respects, as further explained below.

First, the data and observations reflected in the Hafele, DEQ, and Brown & Caldwell studies discussed above, as well as NWEA's September 2017 follow-up field investigation, indicate that the Facility's discharges have repeatedly caused or contributed to violations of the narrative criteria at OAR 340-041-0007 because they have led to the following in-stream conditions immediately downstream of the outfall and outside of the mixing zone:

- ➤ The formation of "growths having a deleterious effect on stream bottoms, fish or other aquatic life, or that are injurious to health [or] recreation" (OAR 340-041-0007(9));
- ➤ In-stream "conditions that are deleterious to fish or other aquatic life" (OAR 340-041-0007(10)); and
- ➤ "The formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life[.]" (OAR 340-041-0007(11)).

These conditions are reflected in the photographs included in the Hafele Report at 9-10, and the DEQ Report at 39-40. The photographs are by way of example only; NWEA alleges that these in-stream conditions are present downstream of the Facility's outfall and outside of the mixing zone at all times as a result, in part, of the Facility's discharge.

Second, the Facility's discharges have repeatedly caused or contributed to violations of the narrative criteria at OAR 340-041-0007 downstream from the Facility and outside of the mixing zone because the effluent contributes to the following instream aesthetic conditions:

- ➤ "The creation of tastes or odors . . . that are deleterious to fish or other aquatic life" (OAR 340-041-0007(10));
- ➤ "Objectionable discoloration, scum, oily sheens, or floating solids . . . may not be allowed" (OAR 340-041-0007(12)); and
- ➤ "Aesthetic conditions offensive to the human senses of sight, taste, smell, or touch may not be allowed" ((OAR 340-041-0007(13))

Visible impacts of the Facility's effluent include visible objectionable discoloration from the effluent plume as well as floating foam downstream from the outfall as shown in the photos attached to this notice letter (from September 2017), as well as on page 9 of the Hafele Report. Other aesthetic impacts include objectionable odors offensive to the human sense of smell immediately downstream from the Facility's outfall and outside of the mixing zone. Recreational and professional river users have routinely experienced and reported these aesthetic impacts for years.

At a <u>minimum</u>, these violations occurred on or about the following dates for which NWEA has obtained photographic or other evidence:

Dates of	Documented In-Stream Effects	Reference
Violations	(Violations of OAR 340-041-0007)	
October 10 & 11, 2012	 Formation of "growths having a deleterious effect on stream bottoms, fish or other aquatic life" In-stream "conditions that are deleterious to fish or other aquatic life" "The formation of appreciable bottom deposits or the formation of any organic deposits deleterious to fish or other aquatic life[.]" Presence of "objectionable discoloration" and "floating solids" Presence of "aesthetic conditions offensive to the human 	Hafele Report at 5-6, 9-10
September 25, 2013	 senses of sight, taste, smell, or touch" Formation of "growths having a deleterious effect on stream bottoms, fish or other aquatic life" In-stream "conditions that are deleterious to fish or other aquatic life" "The formation of appreciable bottom deposits or the formation of any organic deposits deleterious to fish or other aquatic life[.]" 	DEQ Report at 39-40
October 16 & 17, 2013	 Formation of "growths having a deleterious effect on stream bottoms, fish or other aquatic life" "The formation of appreciable bottom deposits or the formation of any organic deposits deleterious to fish or other aquatic life[.]" 	Brown & Caldwell Report at 133-136
October 7, 2016	 Presence of "objectionable discoloration" and "floating solids" Presence of "aesthetic conditions offensive to the human senses of sight, taste, smell, or touch" 	Exhibits A & B (Photographs from Oct. 7, 2016)
June 18, 2017	 Presence of "objectionable discoloration" and "floating solids" Presence of "aesthetic conditions offensive to the human senses of sight, taste, smell, or touch" 	Exhibits C & D (Photographs from June 18, 2017)
September 20, 2017	 Formation of "growths having a deleterious effect on stream bottoms, fish or other aquatic life" In-stream "conditions that are deleterious to fish or other aquatic life" "The formation of appreciable bottom deposits or the formation of any organic deposits deleterious to fish or other aquatic life[.]" Presence of "objectionable discoloration" and "floating solids" Presence of "aesthetic conditions offensive to the human senses of sight, taste, smell, or touch" 	Exhibits E & F (Photographs from September 20, 2017)

However, as with the biocriterion exceedences alleged above, NWEA alleges that these violations of the statewide narrative criteria have occurred on each date upon which the Facility had a discharge to the Rogue River at least since October 10, 2012. Furthermore, because Medford has not upgraded its Facility to reduce its pollutant discharges that are the root cause of these narrative criteria exceedances, Medford's violations will continue indefinitely into the future unless and until a court orders Medford to fully comply with its NPDES permit and the Clean Water Act.

3. Violation of Permit Schedule F, Condition A3: Duty to Mitigate

Medford's NPDES Permit at Schedule F, Condition A3 (page 27) states as follows:

The permittee must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

NWEA alleges that Medford's Facility violated this permit provision on each and every day upon which it discharged effluent since at least February 1, 2013, following the public release of Hafele study. As discussed above, the Hafele study—confirmed by both the DEQ study and the Brown & Caldwell study—provided you with the sound factual basis to know that the Facility's discharge was and is adversely affecting the environment.

Moreover, NWEA alleges that you have been aware of these adverse environmental effects downstream of your mixing zone caused, at least in part, by your effluent discharge since well before February 1, 2013. NWEA contends that a reasonable search of your own files will reveal more than sufficient information to document your ongoing violations of NPDES Permit Schedule F, Condition A3, including the following:

(a) Monitoring data and other related information regarding the characteristics of your effluent, including data regarding the nutrient concentration and loading in the effluent, as well as in-stream monitoring data and other related information documenting the ambient concentrations of nutrients in the Rogue River downstream from your outfall;

- (b) Data and information documenting the myriad adverse impacts to the Rogue River below the Facility's mixing zone as a result of the Facility's effluent discharge, including but not limited to the growth of nuisance algae and adverse alterations of the native communities of macroinvertebrates of the type assessed in the Hafele, DEQ, and Brown & Caldwell studies;
- (c) The steps available to Medford to minimize or prevent the Facility's discharge from causing or contributing to these adverse effects, including but not limited to improvements to or expansion of your aeration capacity or return activated sludge system, or the addition of a nutrient removal system; and
- (d) The reasonableness of those available steps, especially in light of Medford's extremely low wastewater and sewer rates. *See, e.g.*, Oregon League of Cities, Water, Wastewater and Stormwater Rate Survey (March 2015)¹ at 92 (showing that Medford charges its customers a wastewater fee of only \$15.85 per 5,000 gallons, far less than any other Oregon city with a population of 50,000 or more); *id.* at 95 (showing that Medford has by far the lowest wastewater rate of the Southern Oregon regional cities); *id.* at 124 (indicating that unlike several other large Oregon cities, Medford's Facility lacks advanced secondary or tertiary treatment, nitrogen removal capability, or phosphorus removal capability).

As with the violations alleged above based upon Oregon's biocriterion and state-wide narrative criteria, Medford's violations of Schedule F, Condition A3 of its NPDES Permit are ongoing and will continue indefinitely until redressed by an order of the court, or until the Facility makes the physical and/or operational upgrades necessary to abate the adverse environmental effects of the Facility's discharges.

V. Conclusion

Section 309(d) of the CWA, 33 U.S.C. § 1319(d), adjusted by 40 C.F.R. § 19.4, provides for the assessment of penalties of up to \$52,414 per day for violations that occurred after November 2, 2015, and up to \$37,500.00 per day for violations occurring on or before that date. If forced to file suit, NWEA intends to seek civil penalties in

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¹ *Available at* https://www.orcities.org/Portals/17/Library/Water%20Rate%20Survey%203-17-15.pdf.

addition to appropriate declaratory and injunctive relief as may be necessary to eliminate the Medford Facility's CWA violations.

NWEA would prefer to avoid litigation if possible. If you wish to discuss the means of resolving the violations alleged above without resort to litigation, we strongly encourage you to contact us as early as possible during the 60-day notice period. If meaningful and significant progress has not been made towards a satisfactory resolution of the Facility's CWA violations, NWEA will file suit in the U.S. District Court for the District of Oregon on or about the 60th day following the date of this letter.

In addition, if you do not advise us of the steps that Medford has taken or has definite plans to take during the notice period to correct the violations alleged above, we will assume that no such steps have been or will be taken and that violations are likely to continue.

Sincerely,

James N. Saul Lia Comerford

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Counsel for NWEA

Copies sent by certified mail to:

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