



October 25, 2021

**Submitted via email**

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Attn: NPDES Permit Renewal Comments  
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**RE: COMMENTS ON DRAFT OREGON CAFO NPDES GENERAL PERMIT #01-2021**

Dear Ms. Short and Ms. Moore:

Stand Up to Factory Farms submits these comments—on behalf of itself, its member organizations,<sup>1</sup> and Willamette Riverkeeper<sup>2</sup>—on the Draft Oregon

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<sup>1</sup> Stand Up to Factory Farms is a coalition of local, state, and national organizations with hundreds of thousands of members and supporters in Oregon. Its members include Animal Legal Defense Fund, Center for Biological Diversity, Center for Food Safety, Columbia Riverkeeper, Food & Water Watch, Food & Water Action, Friends of the Columbia Gorge, Friends of Family Farmers, Humane Voters Oregon, Oregon Rural Action, and WaterWatch of Oregon. Stand Up to Factory Farms is concerned about the harmful impacts of mega dairy CAFOs on Oregon's environment, family farms, public health, rural communities, wildlife, and animal welfare. STAND UP TO FACTORY FARMS, <https://standuptofactoryfarms.org/> (last visited Oct. 24, 2021).

<sup>2</sup> Willamette Riverkeeper's sole mission is to protect and restore the Willamette River. We believe that a river with good water quality and abundant

Confined Animal Feeding Operation National Pollutant Discharge Elimination System General Permit #01-2021 (Draft General Permit). In sum, the commenting coalition is concerned that the Draft General Permit is not ambitious enough to protect Oregon’s water resources from mega dairy confined animal feeding operations (CAFOs).

**I. The Draft General Permit must depart from Oregon’s historically lax approach to regulating CAFOs, which has allowed CAFOs to degrade Oregon’s water resources.**

According to the Oregon Department of Agriculture (ODA), the goal of the Oregon Confined Animal Feeding Operation National Pollutant Discharge Elimination System General Permit is “to prevent pollution of surface and groundwater through oversight of CAFO activities.”<sup>3</sup> But unless the Draft General Permit departs from Oregon’s historically lax approach to regulating CAFOs—which has allowed CAFOs to cause significant surface and groundwater pollution, endangering drinking water quality and ecosystems—it cannot and will not achieve this goal. Oregon’s increasingly consolidated dairy industry will continue polluting Oregon’s water resources so long as ODA permits it.

In addition to gutting Oregon’s rural economy and driving its small and mid-sized dairy farms nearly to extinction, the consolidation of Oregon’s dairy industry has accelerated the degradation of Oregon’s water resources.<sup>4</sup> In 1992, there were 99,035 dairy cows and 1,541 dairy farms in Oregon.<sup>5</sup> By 2017, the number of dairy cows had increased to 128,284, and the number of dairy farms had plummeted to

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natural habitat, safe for fishing and swimming is a basic public right. The Willamette River belongs to all of us and should be protected as such. We work to enable the Willamette River Watershed to function more naturally with cold, pure water, meandering backchannels, and dynamic habitat for fish and wildlife. The health of this natural ecosystem is inseparable from the quality of life of our communities who live and work in its surrounding watershed; each is dependent on the other. WILLAMETTE RIVERKEEPER, <https://willamette-riverkeeper.org/mission> (last visited October 24, 2021).

<sup>3</sup> STATE OF OREGON, CONFINED ANIMAL FEEDING OPERATION PERMIT PROGRAM, CAFO NPDES GENERAL PERMIT #01 AND FACT SHEET 1 (2021).

<sup>4</sup> See EPA, *Risk Assessment Evaluation for Concentrated Animal Feeding Operations 2* (May 2004) (“Underlying all of the environmental problems associated with CAFOs is the fact that too much manure accumulates in restricted areas.”).

<sup>5</sup> U.S. DEP’T OF AGRIC., NAT’L AGRIC. STATISTICS SERV., 1992 CENSUS OF AGRICULTURE STATE DATA Oregon 31 (1992), [https://www.nass.usda.gov/Publications/AgCensus/2017/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Oregon/st41\\_1\\_0011\\_0012.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_1_State_Level/Oregon/st41_1_0011_0012.pdf) (Table 29. Milk Cow Herd Size by Inventory and Sales: 1992).

only 645.<sup>6</sup> Today, there are only 184 dairy farms left in Oregon,<sup>7</sup> and most of them are CAFOs that produce vast quantities of waste.<sup>8</sup>

A single dairy CAFO with only one thousand cows produces as much waste as a city of 164,500 humans.<sup>9</sup> Even the smallest mega dairy CAFO with 2,500 dairy cows<sup>10</sup> would produce as much waste as a city of 411,000 humans.<sup>11</sup> Larger mega dairy CAFOs, such as the proposed Easterday Farms Dairy, which seeks to confine 28,300 cows on the site of the former Lost Valley Farm,<sup>12</sup> would produce approximately seven times the waste of Portland, Oregon.<sup>13</sup>

Unlike cities, however, CAFOs rely on “traditional” manure management methods to store and dispose of manure, which “are not adequate to contend with the large volumes present at CAFOs.”<sup>14</sup> The “age-old practice” of storing raw manure in holding lagoons and disposing of it by land application—which persists today only because it is the cheapest available option<sup>15</sup>—pollutes groundwater and

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<sup>6</sup> U.S. DEP’T OF AGRIC., NAT’L AGRIC. STATISTICS SERV., 2017 CENSUS OF AGRICULTURE STATE DATA Oregon 23 (2017), [https://www.nass.usda.gov/Publications/AgCensus/2017/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Oregon/st41\\_1\\_0017\\_0019.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_1_State_Level/Oregon/st41_1_0017_0019.pdf) (Table 17. Milk Cow Herd Size by Inventory and Sales: 2017).

<sup>7</sup> See OR. DAIRY AND NUTRITION COUNCIL, STATE OF THE OREGON DAIRY INDUSTRY (2021), <https://odncouncildotorg.files.wordpress.com/2021/04/2021-odnc-soti.pdf>.

<sup>8</sup> See EPA, *supra* note 4, at 6.

<sup>9</sup> *Id.*

<sup>10</sup> Legislation that would enact a mega dairy moratorium, which was introduced this year in Oregon, defines a “mega dairy” as one that has 2,500 cows or more. S.B. 0583, 81st Leg. Assemb., 2021 Reg. Session (Or. 2021); H.B. 2924, 81st Leg. Assemb., 2021 Reg. Session (Or. 2021). These comments adopt that definition.

<sup>11</sup> *Id.*

<sup>12</sup> George Plaven, *Groups oppose permit for Easterday Farms Dairy*, EAST OREGONIAN (Nov. 22, 2019), [https://www.eastoregonian.com/news/local/groups-oppose-permit-for-easterday-farms-dairy/article\\_68bbe86b-e1bf-5e0b-a4c1-36dd53b6d3fe.html](https://www.eastoregonian.com/news/local/groups-oppose-permit-for-easterday-farms-dairy/article_68bbe86b-e1bf-5e0b-a4c1-36dd53b6d3fe.html).

<sup>13</sup> See World Population Review, *Portland, Oregon Population 2021*, <http://worldpopulationreview.com/us-cities/portland-population/> (Oct. 16, 2021) (stating that Portland’s population is 662,549).

<sup>14</sup> EPA, *supra* note 4, at 2.

<sup>15</sup> CARRIE HRIBAR, NAT’L ASSOC. OF LOCAL BDS. OF HEALTH, UNDERSTANDING CONCENTRATED ANIMAL FEEDING OPERATIONS AND THEIR IMPACTS ON COMMUNITIES 2 (2010), [https://www.cdc.gov/nceh/ehs/docs/Understanding\\_cafos\\_nalboh.pdf](https://www.cdc.gov/nceh/ehs/docs/Understanding_cafos_nalboh.pdf) (“Ground application of untreated manure is one of the most common disposal methods due to its low cost.”)

surface water resources<sup>16</sup> via sprayfield runoff and lagoons that leak, seep, and catastrophically breach.<sup>17</sup> As a result, Oregon’s surface and groundwater resources—including its drinking water sources and aquatic habitats for endangered and threatened wildlife—are polluted from CAFO manure.

### A. Groundwater

CAFOs have created widespread and dangerous nitrate contamination in at least three areas of the state, necessitating the creation of three groundwater management areas.<sup>18</sup> Testing conducted in the Lower Umatilla Basin Groundwater Management Area (LUBGWMA) in the 1990s found nearly a third (30%) of groundwater samples from this area exceeded the state trigger level.<sup>19</sup> Samples from areas dominated by CAFOs and agricultural fields where CAFO waste is applied revealed nitrate levels that reached and exceeded 70 mg/L<sup>20</sup>—seven times the 10 mg/L MCL for nitrate.<sup>21</sup> A 1996 study showed that 23% of the population in this area was drinking private well water with nitrate concentrations over the 10 mg/L MCL.<sup>22</sup> Of the households with nitrate levels over the MCL, 72% were not taking measures to effectively remove the nitrates before human consumption.<sup>23</sup>

More recent data indicate that nitrate contamination has only gotten worse in this area and that CAFOs remain a primary cause.<sup>24</sup> In fact, “[t]he single largest

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<sup>16</sup> *Id.* at 3, 4; EPA, *supra* note 4, at 1, 2.

<sup>17</sup> Hribar, *supra* note 15, at 3; EPA, *supra* note 4, at 1.

<sup>18</sup> *See infra* section II.A.(discussing GWMA’s); *Groundwater Management Areas*, DEP’T OF ENVTL. QUALITY, <https://www.oregon.gov/deq/wq/programs/Pages/GWP-Management-Areas.aspx> (last visited Oct. 24, 2021) (listing LUBGWMA, Northern Malheur County GWMA, and Southern Willamette Valley GWMA as the three GWMA’s designated due to elevated nitrate concentrations in groundwater, including from CAFOs).

<sup>19</sup> GERALD H. GRONDIN ET AL., *HYDROGEOLOGY, GROUNDWATER CHEMISTRY AND LAND USES IN THE LOWER UMATILLA BASIN GROUNDWATER MANAGEMENT AREA, NORTHERN MORROW AND UMATILLA COUNTIES, OREGON, FINAL REVIEW DRAFT, ES-1 & ES-5*, (1995). At the time of these initial tests, the Oregon trigger level was set equal to EPA’s MCL of 10 mg/L but has since been adjusted to the more protective standard of 7 mg/L. *Id.* at ES-2.

<sup>20</sup> *Id.* at ES-6–ES-7.

<sup>21</sup> *See* 40 C.F.R. § 141.11(d).

<sup>22</sup> Thomas Mitchell & Anna Harding, *Who Is Drinking Nitrate in their Well Water? A Study Conducted in Rural Northeastern Oregon*, *J. ENVTL. HEALTH* 14, 14 (1996).

<sup>23</sup> *Id.* at 18.

<sup>24</sup> As detailed in a recent emergency petition submitted to the Environmental Protection Agency under the federal Safe Drinking Water Act by several members

[nitrate] increase was at a CAFO monitoring well.”<sup>25</sup> Groundwater monitoring well data from manure application sites show continuing nitrate elevations, with 48% exceeding the 10 mg/L MCL and 60% exceeding the GWMA trigger level of 7 mg/L.<sup>26</sup> This well data confirms that nitrate elevations still exceed 70 mg/L in certain areas dominated by CAFOs and agricultural fields where CAFO manure is applied.<sup>27</sup>

Likewise, high levels of nitrate contamination in Northern Malheur County led Oregon to designate the Northern Malheur County Groundwater Management Area (NMCGWMA) in 1991.<sup>28</sup> Thirty-two percent of groundwater wells tested in the area contained nitrates at levels above the 10 mg/L MCL, with some levels reaching 52mg/L.<sup>29</sup> Though recent studies show some improvement in nitrate levels in the NMCGWMA, with 51% of wells decreasing in nitrates, 20% of wells reflect nitrate levels that have stayed the same since the early 1990s and 29% of wells reflect that nitrate levels are increasing.<sup>30</sup>

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of Stand Up to Factory Farms, CAFOs caused and are continuing to worsen nitrate pollution in the LUBGWMA. See Petition for Emergency Action Pursuant to the Safe Drinking Water Act § 1431, 42 U.S.C. § 300i, to Protect Citizens of the Lower Umatilla Basin in Oregon from Imminent and Substantial Endangerment to Public Health Caused by Nitrate Contamination of Public Water Systems and Underground Sources of Drinking Water 15 (Jan. 16, 2020) (asking EPA to take emergency action to address the dangerous, ongoing nitrate pollution in the LUBGWMA) (Attach. 1). Threemile Canyon Farms, one of the sites where nitrate contamination is already severe and is continuing to worsen, has an individual NPDES permit. This indicates that even individual permits are not strong enough to protect Oregon’s water resources.

<sup>25</sup> LOWER UMATILLA BASIN GROUNDWATER MANAGEMENT COMMITTEE, DEP’T OF ENVTL. QUALITY, SECOND LOWER UMATILLA BASIN GROUNDWATER MANAGEMENT AREA LOCAL ACTION PLAN 27–28, 31, 34 (Oct. 28, 2020), [https://lubgwma.org/wp-content/uploads/2020/12/Second-LUBGWMA-Action-Plan\\_FINAL.pdf](https://lubgwma.org/wp-content/uploads/2020/12/Second-LUBGWMA-Action-Plan_FINAL.pdf).

<sup>26</sup> *Id.* at 35.

<sup>27</sup> *Id.*

<sup>28</sup> DEP’T OF ENVTL. QUALITY, NORTHERN MALHEUR COUNTY GROUNDWATER MANAGEMENT ACTION PLAN 16–17 (DEC. 1991), <https://www.oregon.gov/deq/FilterDocs/gw-nmcgwma-actionplan.pdf>.

<sup>29</sup> *Id.* at 22.

<sup>30</sup> DEP’T OF ENVTL. QUALITY, MEMO FROM PHIL RICHARDSON TO DAVID ANDERSON & CHARLES KENNEDY, NORTHERN MALHEUR COUNTY GROUNDWATER MANAGEMENT AREA AREA-WIDE TREND ANALYSIS 2 (Feb. 6, 2020), <https://www.oregon.gov/deq/wq/Documents/nmalheurtrend2020.pdf>.

Of the 513 permitted CAFOs in Oregon, 369 CAFOs were registered to the Current General Permit in 2020.<sup>31</sup> Of those, 54 were in Area V, which includes the LUBGWMA,<sup>32</sup> and 29 of those 54 were large CAFOs.<sup>33</sup> The proposed Easterday Farms Dairy, which seeks to confine 28,300 cows on the site of the former Lost Valley Farm, would also be in this area.<sup>34</sup> In Area VI, which includes the NMCGWMA, there were 88 CAFOs, and 23 were large CAFOs.<sup>35</sup> One existing mega dairy CAFO in this area seeks to triple the number of cows it is permitted to confine to 9,000 cows.<sup>36</sup> The Draft General Permit presents an opportunity for ODA to improve conditions in existing GWMA and proactively prevent the need for additional ones in Areas V and VI and across the state.<sup>37</sup>

## B. Surface Waters

Oregon's surface waters are also polluted by CAFO manure constituents. In the northwestern region of the state, the North Coast Basins are under a Total Maximum Daily Load (TMDL) to address stream segments and lakes impaired by *E.coli* bacteria from dairy CAFO manure runoff.<sup>38</sup> The nearby Tillamook Bay Watershed is also under a TMDL<sup>39</sup> because it is contaminated with fecal bacteria<sup>40</sup> originating from the legion dairy CAFOs in the region.<sup>41</sup> Each of the five major rivers and many of the streams in in this watershed are also contaminated by fecal

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<sup>31</sup> OR. DEP'T OF AGRIC., CONFINED ANIMAL FEEDING OPERATION (CAFO) PROGRAM 2020 ANNUAL REPORT 8 (2020), <https://www.oregon.gov/oda/shared/Documents/Publications/NaturalResources/CAFORepor2020.pdf>.

<sup>32</sup> *Id.* at 9.

<sup>33</sup> Fourteen were Large Tier 2 CAFOs, and fifteen were Large Tier 1 CAFOs. *Id.*

<sup>34</sup> Plaven, *supra* note 12.

<sup>35</sup> Seven were Large Tier 2 CAFOs, and sixteen were Large Tier 1 CAFOs. *Id.*

<sup>36</sup> NUTRIENT MANAGEMENT PLAN FOR RECLA DAIRY & FARMS INC, <https://www.oregon.gov/oda/programs/NaturalResources/Documents/CAFOPublicNotices/2021/ReclaNMP.pdf>.

<sup>37</sup> Though some of the biggest polluting CAFOs in LUBGWMA hold individual NPDES permits rather than being registered to the Current General Permit,

<sup>38</sup> OR. DEP'T OF ENVTL. QUALITY, NORTH COAST SUBBASINS TOTAL MAXIMUM DAILY LOAD (TMDL) 1-3 (June 2003), <https://www.oregon.gov/deq/FilterDocs/NCStmdl.pdf>; *see* OR. DEP'T OF AGRIC., NORTH COAST BASIN AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN 18 (June 2018), <https://www.oregon.gov/oda/shared/Documents/Publications/NaturalResources/NorthCoastAWQMAreaPlan.pdf> (noting that the majority of farm and ranch sales came from the dairy industry).

<sup>39</sup> OR. DEP'T OF ENVTL. QUALITY, TILLAMOOK BAY TOTAL MAXIMUM DAILY LOAD (TMDL) (June 2001), <https://www.oregon.gov/deq/FilterDocs/NCtilltmdl.pdf>.

<sup>40</sup> *Id.* at 1.

<sup>41</sup> *Id.* at 15.

bacteria.<sup>42</sup> CAFOs and land application of CAFO manure are “[m]ajor sources” of this contamination.<sup>43</sup> In the past, Tillamook Bay has supported shellfish harvesting, and the rivers in the area supported recreational swimming and wading.<sup>44</sup> But today, “[c]oncentrations of bacteria in the waters of the rivers and the Bay are commonly too high to allow safe use for either of these activities.”<sup>45</sup>

Tillamook County—which comprises all of Area I<sup>46</sup>—represents the densest concentration of CAFOs in Oregon. A total of 89 CAFOs there were registered to the Current General Permit in 2020.<sup>47</sup> The Draft General Permit presents an opportunity for ODA to improve impaired surface waters in this area and to proactively prevent the need for additional TMDLs here and across the state.

### C. Wildlife

CAFO water pollution is also harming Oregon’s wildlife, including animals who are members of endangered and threatened species. Such pollution harms aquatic biodiversity by degrading habitat, reducing species fertility, causing species mutation, increasing mortality, changing natural food resources, and generating expansion of nonnative species, often at the expense of native populations.<sup>48</sup> Oregon is home to many endangered species, including several species of salmon.<sup>49</sup> The Draft General Permit must prevent CAFO pollution from pushing these species closer to extinction.

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<sup>42</sup> *Id.* at 1.

<sup>43</sup> *Id.* at 173.

<sup>44</sup> *Id.* at 7.

<sup>45</sup> *Id.*; see Karina Brown, *Oregon Oyster Farmer Fights Flood of Cow Poop*, COURTHOUSE NEWS SERVICE (Apr. 3, 2017), <https://www.courthousenews.com/oregon-oyster-farmer-fights-flood-cow-poop/>.

<sup>46</sup> Or. Dep’t of Agric., *supra* note 31, at 7.

<sup>47</sup> *Id.* at 8.

<sup>48</sup> LIVESTOCK’S LONG SHADOW: ENVIRONMENTAL ISSUES AND OPTIONS 209, 273 (2006), UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION, <http://www.fao.org/3/a0701e/a0701e.pdf>.

<sup>49</sup> See, e.g. Or. Dep’t of Env’tl. Quality, *supra* note 39, at 7 (discussing salmon species and other fish living in the Tillamook Bay Watershed, including the threatened Coho Salmon); *Threatened, Endangered, and Candidate Fish and Wildlife Species*, OR. DEP’T OF FISH AND WILDLIFE, [https://www.dfw.state.or.us/wildlife/diversity/species/threatened\\_endangered\\_candidate\\_list.asp](https://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_candidate_list.asp) (last visited Oct. 24, 2021).

## **II. Proposed revisions in the Draft General Permit do not go far enough.**

### **A. The General Permit should not be available to CAFOs located in environmentally sensitive areas, such as GWMA and Special Flood Hazard Areas.**

The Draft General Permit's changes for CAFOs located in GWMA do not go far enough. Because these areas are already contaminated with the same pollutants, namely nitrates, from CAFOs, any facility in a GWMA should be subject to individual permitting. While the Draft General Permit provides for some enhanced reporting for CAFOs located in GWMA, the monitoring requirements are insufficient to assess water quality in those areas or help bring contamination levels back below the safe threshold. The Draft General Permit includes increased soil monitoring requirements for these CAFOs but, as explained below, soil monitoring is wholly inadequate to determine the levels of nitrates entering the groundwater.

GWMA are areas in which the groundwater is contaminated by nitrates or other contaminants. A GWMA is declared when either nitrates are present at 70% of the DEQ established maximum measurable levels (MML), or 50% of the MML for any other contaminant is present. The MMLs are protective of public health and the environment, and existing and future beneficial uses of the groundwater. When a GWMA has been declared, a groundwater committee is established to bring the MMLs back to safe levels. As stated above, the groundwater beneath and around CAFOs is uniquely susceptible to nitrate contamination, increasing the risk that groundwater quality will be compromised and a GWMA will need to be declared.

Since GWMA are already highly polluted areas with unsafe levels of nitrates, it is irresponsible to submit the area to the continued pollution from CAFOs, especially large operations like mega dairy CAFOs (Tier II large facilities under the proposed permit). In Oregon, as discussed above, some GWMA were primarily caused by the CAFOs in the area. For example, in the LUBGWMA, CAFOs and irrigated agriculture (in part using waste generated by CAFOs) were the primary polluters in the area, creating millions of gallons of waste that leached into the water. The highest nitrate concentrations in the area were located at CAFOs. GWMA are established so they can be rehabilitated. Siting a CAFO within a GWMA will exacerbate existing problems and render the goal of recovery almost impossible to achieve. Moreover, it is reckless to contemplate permitting new CAFOs within GWMA, as Oregon proposed to do by allowing Easterday Farms to open a new facility under a new National Pollutant Discharge Elimination System (NPDES) permit in the LUBGWMA. Thus, allowing these types of facilities (like large Tier II dairy CAFOs) to use the Draft General Permit is irresponsible. Increasing the level of contamination in the area guarantees that the problem will



not be cured, further endangering the health and safety of those living in the area and relying on the aquifers for drinking water.

Not only do CAFOs discharge an excessive quantity of contaminants into the environment, but the hydrogeology of some GWMA can aggravate the effect of the pollution. In the LUBGWMA for example, shallow aquifers are overlaid by porous, sandy soils, which are subject to high rates of permeability when exposed to moisture. Widespread irrigation of agricultural lands and discharges from dairy CAFOs brought large volumes of water and contaminants to those permeable soils, allowing the contaminants to reach groundwater quicker than usually possible. Those conditions led to nitrate leaching into and contaminating groundwater, which is a key source of drinking water in the area. Taking the hydrogeological sensitivity of that region and others into account, it is dangerous to site CAFOs in locations where they can do far greater damage than normal. ODA must take special care with any such facilities through individual permits, not the General Permit.

Nor should the Draft General Permit be available to CAFOs that are located in Special Flood Hazard Areas (SFHAs), as designated by the Federal Emergency Management Agency (FEMA).<sup>50</sup> These areas have a 4% chance of being hit with a 25-year flood within one year, a 34% chance within ten years, a 56% chance within twenty years, a 71% chance within thirty years, and an 87% chance within fifty years.<sup>51</sup> Accordingly, these CAFOs present unique and significant risks to Oregon's surface waters and should instead be required to get an individual NPDES permit capable of addressing and mitigating those risks.

This is not a theoretical problem. At least one mega dairy CAFO, Noble Dairy, is sited and operates in a SFHA on the banks of the Applegate River in Josephine County, Oregon.<sup>52</sup> This mega dairy CAFO's production area, including its

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<sup>50</sup> *Special Flood Hazard Area (SFHA)*, FEMA, [fema.gov/glossary/special-flood-hazard-area-sfha](https://www.fema.gov/glossary/special-flood-hazard-area-sfha) (last visited Oct. 18, 2021) (defining "Special Flood Hazard Area" as "[a]n area having special flood, mudflow or flood-related erosion hazards and shown on . . . a Flood Insurance Rate Map (FIRM) Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V").

<sup>51</sup> FEMA, UNIT 3: NFIP FLOOD STUDIES AND MAPS 3-5, [https://www.fema.gov/pdf/floodplain/nfip\\_sg\\_unit\\_3.pdf](https://www.fema.gov/pdf/floodplain/nfip_sg_unit_3.pdf).

<sup>52</sup> Stand Up to Factory Farms and the Animal Legal Defense Fund commented in opposition to Noble Dairy's expansion, and these comments incorporate those comments by reference as though they were set forth in their entirety herein. See Animal Legal Defense Fund, Comments in Opposition to Noble Dairy's Proposal to Substantially Change Its Animal Waste Management Plan in Order to Expand and become Oregon's Newest Mega Dairy CAFO (Oct. 15, 2021) (Attach. 2); Stand Up to Factory Farms, Comments in Opposition to Noble Dairy's Proposal to Substantially

manure storage lagoons and many of its cow confinement buildings, lie beneath the SFHA, as do many of the fields upon which it disposes of manure.<sup>53</sup> Together, the manure storage lagoons hold nearly 4.5 million gallons of liquid manure.<sup>54</sup> If these lagoons were inundated in a flood, the environmental impact would be catastrophic. CAFOs should not be sited or operated in SFHAs at all, but to the extent they are they should at least be required to have an individual NPDES permit.

**B. The General Permit should not be available to large Tier II CAFOs.**

While the commenting coalition supports the bifurcation of large Tier I and large Tier II CAFOs, the latter should be required to have an individual NPDES permit. At the very least, there should be an upper limit on the size of large Tier II CAFOs, and any CAFOs that exceed that upper limit should be required to have an individual NPDES permit.

**C. Requirements for water supply information should be more specific and should apply to all CAFOs, not just large Tier II CAFOs.**

Proposed provisions requiring applicants to provide “information regarding” its water supply and the animals and operations that can be sustained with its water supply. As ODA knows, Lost Valley Farm was a disaster in part because it was allowed to open, and to put approximately 10,000 cows on the site, even though its proposed water supply for drinking water for the cows and dairy operations (including water to wash the barns) was being challenged and was not legally available. Thus, the proposed added provision in the Draft General Permit is a step in the right direction.

However, the provision needs to be more specific and apply to more than just large Tier II CAFOs. We suggest adding the following after the first sentence: “The information provided shall include all water appropriation permits, certificates and/or agreements under which the water supply will be obtained and shall demonstrate that the presently available legal sources are sufficient to meet all water needs of the CAFO, including drinking water for animals, water for irrigation under the Animal Waste Management Plan and water for operations including cleaning operations. For purposes of this provision, a water supply is not ‘presently available’ if it requires governmental approval that has not been given in final form or if the approval has been stayed by court order or operation of law.” This

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Change Its Animal Waste Management Plan in Order to Expand and become Oregon’s Newest Mega Dairy CAFO (Sep. 8, 2021) (Attach. 3).

<sup>53</sup> Stand Up to Factory Farms, *supra* note 52, at 5–14.

<sup>54</sup> *Id.* at 10.

suggested language would help ensure that the information provided is adequate for review. It would also make clear that a water supply must be demonstrated for all needs of the CAFO, all of which can be tied, directly or indirectly, to water quality.<sup>55</sup>

The requirement for water supply information should apply to all CAFOs registering to the Draft General Permit. Adequate water supplies are necessary for any CAFO to effectively manage its waste and prevent water pollution.

**D. Two-step permitting should apply to all CAFOs, not just large Tier II CAFOs.**

The proposed two-step permitting process should apply to all CAFOs, or at least all large CAFOS (including Tier I). Before any CAFO populates a facility with animals, ODA should make sure it has been constructed according to the approved plans and is otherwise capable of managing its animal waste.

Relatedly, the Draft General Permit should specify that no application to register will be approved (or initially approved in a two-step permitting process) before the applicant has all governmental approvals necessary to operate the CAFO. The specifics and conditions of other governmental approvals inform potential issues with operation of the CAFO and should therefore be included in the information available for public review and comment before ODA decides whether to approve an application. The two-step permitting process should not be used to justify approval of an application to register before other governmental approvals are obtained. The two-step process should be used only to ensure that approved facilities are constructed according to approved plans before animal occupancy.

**E. Animal Waste Management Plans should be more rigorous.**

As a threshold matter, the plan required with an application to register should continue to be called an “Animal Waste Management Plan” (AWMP). The name of the plan should not be changed to a “Nutrient Management Plan.” The latter is an industry-preferred term designed to make the waste of confined animals sound like a good thing and to obscure the true nature of the problem meant to be addressed—the potential for the waste of confined animals to cause water pollution. Calling the plans “Nutrient Management Plans” would demonstrate a pro-industry bias by ODA.

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<sup>55</sup> Drinking water for the animals relates to water quality because a lack of drinking water will result in animal mortalities, which are specifically recognized as a water quality issue. Operations water is required for washing animal waste from CAFO facilities and other waste management. Irrigation water is required to grow crops used to absorb nutrients in the animal waste.

In addition, AWMPs—especially for large Tier II CAFOs, if they are allowed to register to the General Permit—should include an assessment of soil suitability conducted by a qualified professional engineer or certified professional soil scientist. The assessment should recommend required acreage for the management of project nutrient loads considering the proposed site and its soil conditions. It should also include setbacks from sensitive areas.

AWMPs should also be required to identify all transferees (which could not change without a change to the registration) and show, by agreement or otherwise, that the transferee will be legally obligated to use the waste in a manner that will not result in a discharge. A CAFO permit cannot ensure zero discharge if, for example, the CAFO could simply deliver all its animal waste to a neighboring property that land-applies it without any kind of legal requirement to apply the waste only at rates that will not result in water pollution. Given capacity limitations and imperfect information, the general enforcement authorities of ODA and DEQ are not enough to prevent a CAFO from polluting waters of the state (indirectly) in this way.

**F. The Draft General Permit should prohibit all discharges, and any CAFOs that discharge should be required to have an individual NPDES permit.**

The Draft General Permit includes in section S2.A.2 a condition to establish how minimum quantitation limits are used to determine compliance with effluent limits in the event of a discharge. However, the Draft General Permit should not allow discharges in the first place, including from production areas and land application areas. CAFOs that discharge should instead be required to have an individual NPDES permit that provides additional scrutiny of proposed treatment and monitoring.

**III. The Draft General Permit fails to meet basic legal requirements.**

**A. The Draft General Permit fails to require representative monitoring.**

The Clean Water Act (CWA) requires that NPDES permits contain conditions, including data collection and reporting, to “assure compliance” with the Act.<sup>56</sup> Furthermore, Section 308 of the Act states that “[w]henever [it is] required to carry out the objective” of the CWA, “(A) the Administrator shall require the owner or operator of any point source to ... (iii) install, use, and maintain such monitoring

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<sup>56</sup> 33 U.S.C. § 1342(a)(2); *NRDC v. EPA*, 808 F.3d 556, 580 (2d Cir. 2015).

equipment or methods ... and (v) provide such other information as he may reasonably require.”<sup>57</sup>

The Environmental Protection Agency’s (EPA) accompanying CWA regulations require all NPDES permits to include certain monitoring and reporting requirements designed to “assure compliance with permit limitations.”<sup>58</sup> These regulations include, among other provisions, “requirements to monitor: (i) The mass (or other measurement specified in the permit) for each pollutant limited in the permit; (ii) The volume of effluent discharged from each outfall; [and] (iii) Other measurements as appropriate....”<sup>59</sup> Permit monitoring provisions must further specify the “type, intervals, and frequency [of sampling] sufficient to yield data which are representative of the monitored activity, including, when appropriate, continuous monitoring.”<sup>60</sup> Permittees must report monitoring results “on a frequency dependent on the nature and effect of the discharge, but in no case less than once a year.”<sup>61</sup> Given these statutory and regulatory requirements, “[g]enerally, ‘an NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance.’”<sup>62</sup>

The Ninth Circuit recently confirmed that CAFO permits are no exception to this rule. In *Food & Water Watch v. EPA*, the court vacated EPA’s Idaho CAFO General Permit for unlawfully failing to require monitoring provisions capable of ensuring compliance with discharge limitations.<sup>63</sup> The court noted that, despite zero discharge limitations, EPA has estimated that approximately 75% of CAFOs do in fact discharge, and found that CAFOs pose “significant environmental threats.”<sup>64</sup> Despite this, EPA’s permit did not require monitoring to ensure that no discharges via land application or through lagoon leaching were occurring. The court rejected this, finding that while the “statutory and regulatory framework gives discretion to the [permitting agency] in crafting appropriate monitoring requirements for each NPDES permit . . . the [agency’s] discretion is not unlimited” and “a permit must contain monitoring provisions ‘sufficient to yield [representative] data.’”<sup>65</sup> The court vacate EPA’s permit because it “[did] not require monitoring that would ensure detection of unpermitted discharges.”<sup>66</sup>

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<sup>57</sup> 33 U.S.C. § 1318(a).

<sup>58</sup> 40 C.F.R. § 122.44(i)(1).

<sup>59</sup> *Id.*

<sup>60</sup> 40 C.F.R. § 122.48(b).

<sup>61</sup> 40 C.F.R. § 122.44(i)(2).

<sup>62</sup> *NRDC v. EPA*, 808 F.3d at 583 (quoting *NRDC v. City of L.A.*, 725 F.3d 1194, 1207 (9th Cir. 2013)).

<sup>63</sup> *Food & Water Watch v. EPA*, 13 F.4th 896 (9th Cir. 2021).

<sup>64</sup> *Id.* at 899.

<sup>65</sup> *Id.* at 905.

<sup>66</sup> *Id.* at 906.

The sampling and violation monitoring requirements that ODA's Draft General Permit does contain are plainly insufficient to satisfy the CWA or EPA regulations. The infrequent soil and manure sampling requirements included in the Draft General Permit look at the nitrogen and phosphorus content of CAFO waste and soil from land application areas, helping calculate agronomic rates of application, but have nothing to do with whether discharges are occurring that impact waters of the state.<sup>67</sup> ODA's permit requires actual monitoring only in the event of a *violation*, rather than to demonstrate compliance and provide representative data.<sup>68</sup> ODA must therefore include monitoring requirements that allow for meaningful oversight of Oregon CAFOs' compliance with the Draft General Permit's conditions and effluent limitations. This requires representative water quality monitoring at CAFO production sites, including lagoons that may leach into groundwater, as well as land application areas; this monitoring must provide data capable of demonstrating permit compliance.

ODA must determine what monitoring is representative for a particular CAFO applicant. At production areas, it will likely include monitoring surface water and groundwater impacted by waste lagoons, as well as any additional discharge points from production areas, such as ditches that may carry contaminated wastewater off-site and into waterways.<sup>69</sup> At land application areas, representative monitoring must also include monitoring requirements for conduits to waterways, including tile line intake structures, sinkholes, and agricultural wellheads.

Until ODA requires representative effluent monitoring, many of the terms and conditions of the Draft General Permit will remain mere words on paper. ODA may not excuse CAFOs from the monitoring required of all NPDES permittees simply because it has created a legal fiction that these operations do not discharge. But even if that were the case, zero is an effluent limit, and the CWA requires CAFOs to demonstrate their compliance with it.

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<sup>67</sup> See Draft General Permit Section S4.A.

<sup>68</sup> See *id.* (requiring grab samples only in the event of discharges); Draft General Permit Section S4.E (providing that additional surface water and/or groundwater monitoring requirements may be required only at ODA's discretion).

<sup>69</sup> Other states require exactly this to ensure compliance with NPDES permits and protect water quality. See California General NPDES Permit No. CAG011001 for CAFOs within the North Coast Region, at Attachment E Monitoring and Reporting Program.

**1. The terms of the Draft General Permit are not sufficient to protect Oregon’s groundwater.**

Groundwater is a valuable state resource in Oregon, with approximately 70% of all Oregon residents relying solely or in part on groundwater for drinking water. Groundwater also provides irrigation water, as well as base flow for most of the state’s rivers, lakes, streams, and wetlands, which many species of wildlife rely on to survive. The Draft General Permit fails to provide the monitoring or best-practicable safeguards, required by law, that are necessary to protect groundwater in Oregon.

**a. Federal and State Regulations**

Under federal law, the CWA requires dischargers to obtain permits that place limits on the type and quantity of pollutants that can be released into the Nation's waters. These effluent limitations are technology-based because they are “determined according to the best available or practicable technology.” Where effluent limitations prove insufficient to attain or maintain certain water quality standards, the CWA requires NPDES permits to include additional water quality based effluent limitations.” Although ordinarily, an effluent limitation consists of a requirement to abide by a specific numeric criterion for a given pollutant, effluent limitations may also be established by “best management practices” where imposing a numeric criterion is infeasible.

While the CWA preserves groundwater regulation primarily for state law, the CWA applies to groundwater that is hydrologically connected to surface water. The Supreme Court has held that when a discharge into groundwater is “the functional equivalent of a direct discharge” into surface water, the CWA applies. Time and distance from point source to surface water are the most important factors in determining whether a functional equivalent discharge has occurred in most cases, but not necessarily every case. Other factors to look at include the nature of the material through which the pollutant travels, the extent to which the pollutant is diluted or chemically changed as it travels, the amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source, the manner by or area in which the pollutant enters the navigable waters, and the degree to which the pollution has maintained its specific identity.

Oregon has its own state water quality regulations, which are more stringent than federal law. State water quality standards must be “enforced through meaningful limitations” in federal NPDES permits. Notably, Oregon recognizes groundwater as a water of the state. It is therefore the policy of the state to protect, maintain, and improve groundwater quality, and to prevent, abate, and control new or existing water pollution of groundwater. Furthermore, “it is the policy of the State of Oregon to protect the quality of the waters of this state by preventing

animal wastes from discharging into the waters of the state,” which includes groundwater. These standards should thus be enforced through meaningful limitations.

In order to prevent groundwater contamination, all state agency rules and programs affecting groundwater must be consistent with the state’s groundwater objectives. DEQ has a major role in groundwater preservation and must coordinate interagency management of groundwater to achieve the goals of the state. Strategies include an anti-degradation policy to emphasize the prevention of groundwater pollution, and a requirement for point sources to employ the highest and best practicable methods to prevent the movement of pollutants to groundwater. Available technologies for treatment and waste reduction, cost effectiveness, site characteristics, pollutant toxicity and persistence, and state and federal regulations are considerations for determining the highest and best practicable methods that protect public health and the environment.

Groundwater contamination levels shall be used to trigger specific governmental actions designed to prevent those levels from being exceeded or to restore ground water quality to at least those levels.

**b. The Draft General Permit does not comply with Oregon law.**

The Draft General Permit does not comply with state and federal regulations that protect groundwater. The Draft General Permit does not include sufficient groundwater monitoring through use of groundwater monitoring wells and does not require the highest and most practicable methods of preventing pollution. This means that CAFOs can comply with the Draft General Permit while polluting groundwater, which makes the Draft General Permit unlawful.

First, the Draft General Permit does not include effective monitoring of groundwater. The Draft General Permit requires only soil monitoring. A similar oversight was addressed by the Washington Court of Appeals in holding a NPDES permit for CAFOs in Washington unlawful.<sup>70</sup> In that case, the Washington permit prohibited discharges into groundwater, but Washington Department of Ecology (Ecology) decided to require only soil sampling rather than groundwater monitoring as well. Ecology refused to include groundwater monitoring wells in its proposed permit. Because soil monitoring cannot be an adequate substitute for monitoring the groundwater itself, the court held Ecology’s decision was not supported by substantial evidence. The court reasoned that monitoring requirements in permits exist to ensure that a permittee can effectively monitor its permit compliance, so

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<sup>70</sup> *Washington State Dairy Fed’n v. State*, 490 P.3d 290 (Wash. Ct. App. 2021).



lack of groundwater monitoring meant that permittees could still unknowingly be discharging and contaminating groundwater.

Similarly, here, Oregon water quality regulations are designed to prevent contamination of groundwater. CAFOs are not permitted to pollute groundwater. Without monitoring requirements, the CAFOs, ODA/DEQ, and the public cannot adequately ensure compliance. Soil monitoring is not a replacement for groundwater monitoring wells—the majority of researchers agree that groundwater monitoring is the only way to definitively determine impacts to groundwater quality from residual soil nitrate. CAFOs will not be able to tell if their chemicals and waste are leaking into the groundwater and will be oblivious to whether they are complying with the Draft General Permit or not.

ODA states that it may require groundwater monitoring if a permittee “experiences two or more discharges within a 24-month period that are not associated with a 25-year, 24-hour or greater rainfall event.” But since CAFOs continuously discharge nitrates and other contaminants into groundwater through lagoons and/or seepage from crop application, compost, or other production areas, it does not make sense to wait until there are two discharge events to require groundwater monitoring. It is more protective to require groundwater monitoring for all CAFOs from the start, which will help prevent degradation of Oregon’s waters as required by the State legislature and the CWA.

Furthermore, specific contamination levels trigger governmental actions designed to prevent those levels from being exceeded or to restore ground water quality to at least those levels. The areas surrounding CAFOs are some of the most at risk for groundwater contamination, with a wide array of groundwater contaminants associated with the facilities, including nutrients such as nitrogen and phosphorus; organic matter; solids, including the manure itself and other elements mixed with it such as spilled feed, bedding and litter materials, hair, feathers and animal corpses; pathogens (disease-causing organisms such as bacteria and viruses); salts; trace elements such as arsenic; odorous/volatile compounds such as carbon dioxide, methane, hydrogen sulfide, and ammonia; antibiotics; and pesticides and hormones. Requiring CAFOs to monitor groundwater would not only help their own compliance, but allow the state to effectively monitor the most at-risk groundwater areas and provide prompt remedial measures to prevent or mitigate harm to groundwater. This Draft General Permit should therefore be modified to include groundwater monitoring, through installation of groundwater monitoring wells.

Second, the Draft General Permit lacks enforceable best-practicable protections for groundwater to ensure that CAFOs will not degrade the quality of the groundwater. As detailed above, Oregon groundwater law requires point sources to employ the highest and best practicable methods to prevent the movement of

pollutants to groundwater. Additionally, federal law requires the best-technology when groundwater is hydrologically connected to surface water such that discharge into the groundwater is the functional equivalent of a discharge into surface water.

In Washington, when Ecology failed to include sufficient technology-based protections, “all known, available, and reasonable methods of prevention, control, and treatment (AKART)”, as required under Washington law, the court held that the permit was not protective of groundwater quality standards and violated Washington’s anti-degradation policy. The court particularly focused on manure storage lagoons and composting areas. The methods approved by Ecology were not “the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge,” failing to provide an additional layer of protection to water quality standards. Although the permits prohibited discharges to groundwater, they allowed for operation of production areas that risked doing exactly that.

This permit similarly prohibits discharges into groundwater, including from runoff from waste accumulation areas, seepages, and leakages. Oregon has an analogous anti-degradation policy to Washington—degradation of groundwater must be avoided. Oregon’s “highest and best practicable methods” standard is similar to Washington’s AKART standards. By refusing to require the highest and best practicable methods to prevent the movement of pollutants to groundwater from CAFOs, DEQ has failed to protect against degradation of groundwater in violation of state goals and DEQ’s own administrative rules. Additionally, where groundwater is hydrologically connected to surface water so that a discharge into the groundwater is the functional equivalent of a discharge to surface water, the Draft General Permit violates the CWA by not requiring the best available or practicable technology.

The Draft General Permit only requires that waste storage facilities are approved by ODA. While DEQ guidelines state that waste facilities are to be “constructed, and operated such that manure, contaminated drainage waters or other wastes do not enter the waters of the state at any time, except as may be permitted by the conditions of a specific waste discharge permit,” those guidelines do not mention using the best practicable methods for preventing contamination. Since some contamination of groundwater is inevitable from both lagoons and composting areas, the highest and best practicable protection is what groundwater regulations require for these facilities. The permit should therefore be modified to include the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge, especially for lagoons and composting areas.

Many best-practice technologies are already mandatory for individual CAFOs under consent decrees. Specifically, ODA should require that all lagoons are double

lined with synthetic membrane liners and a leak detection sump and pump to remove leachate collecting between the layers. As ODA recently indicated during the public hearing for this Draft General Permit, it has a policy of requiring double synthetic liners with leak detection for some CAFOs. That is the industry standard for a significant percentage of dairies in Washington, particularly those who have upgraded their systems to prevent groundwater contamination that posed an imminent hazard to neighboring residents. Rather than an informal policy that is only applied to some facilities, this must be a permit condition for all CAFOs using waste lagoons. For composting areas, ODA should require lined collection ditches or strip drains in order to collect stormwater and other liquids generated there and require similar measures for silage areas. In manure areas, ODA should require mechanical dewatering equipment to remove free-draining water from separator solids. Each CAFO should also be required to install a centrifuge manure separator to reduce nitrogen and phosphorus content of the CAFO's manure.

Where including the highest and best practicable methods are infeasible or insufficient, ODA/DEQ should have established additional water quality based effluent limitations. The Draft General Permit contains some effluent limits for surface water, but none for groundwater. Since Oregon law treats groundwater as a water of the State but did not include the best practicable methods for preventing contamination, the Draft General Permit should at the very least have included effluent limits for groundwater. In not doing so, ODA/DEQ failed to provide an additional layer of protection to water quality standards. The Draft General Permit should be modified to add these standards where best practice technologies are not sufficient to protect groundwater.

#### **B. The Draft General Permit fails to prohibit land application on frozen ground.**

The Draft Permit inexplicably fails to prohibit waste application on frozen ground, a practice that poses a clear threat to water quality by ensuring that waste will be susceptible to runoff due to precipitation or melting before crops are available to utilize waste nutrients.<sup>71</sup> EPA recently prohibited land application on frozen, snow-covered, *and* saturated ground in neighboring Idaho's CAFO General Permit, explaining that "[n]ot surprisingly, manure, litter and process wastewater cannot be effectively applied at an agronomic rate during the non-growing season, since there will be minimal or no plant uptake. At the same time, frozen, snow-covered or saturated soils will enhance and facilitate runoff." After reviewing studies of winter manure application and nutrient losses, EPA found that "the majority of [the] studies observed substantial nutrient losses from winter-applied

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<sup>71</sup> Draft General Permit Section S2.C.4.

manure.”<sup>72</sup> In fact, “[s]tudies that specifically addressed the effectiveness of BMPs for winter application of manure demonstrated that although some performed better than others, *none* adequately controlled nutrient runoff.”<sup>73</sup> The same risks exist in Oregon, and as a result the Draft Permit falls short of federal requirements for large CAFOs to minimize the risk of nutrient loss from land application.<sup>74</sup>

### **C. The Draft General Permit fails to regulate ammonia discharges.**

The CWA prohibits the discharge of pollutants into waters of the United States, except when in compliance with an NPDES permit.<sup>75</sup> The Draft General Permit fails to regulate the atmospheric deposition of ammonia into the State and Federal waters in Oregon. Ammonia is produced by breaking down nitrogenous molecules in manure, so consequently CAFOs create ammonia from the large amounts of waste at the facilities. This ammonia enters the atmosphere, and subsequently drifts down into nearby water bodies, adding excess nitrogen to the waters. The excess nitrogen contributes to algal outbreaks, which in turn disrupt oxygen availability in waters, causing “dead zones”—zones devoid of aquatic and marine life. Ammonia depositions are discharges of pollutants into waters of the United States and thus necessitate an NPDES permit.

“Discharge of a pollutant” is defined as any addition of any pollutant to navigable waters from any point source.<sup>76</sup> CAFOs are statutory point sources,<sup>77</sup> and the waters in Oregon that the ammonia discharges are navigable waters.

The term “pollutant” is to be interpreted broadly,<sup>78</sup> and should include that atmospheric ammonia is a pollutant under the CWA, particularly when encompassed by the state definition of “pollutant.” Oregon’s definition of pollutant includes gaseous substances because it includes “industrial, municipal, and agricultural waste discharged into water.”<sup>79</sup> The definition of “wastes” includes “industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances, that will or may cause or tend to cause pollution of any waters of the

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<sup>72</sup> EPA, FACT SHEET FOR NPDES GENERAL PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs) IN IDAHO 14–15 (2019) (Attach. 4).

<sup>73</sup> *Id.* at 19 (emphasis added).

<sup>74</sup> 40 C.F.R. § 412.4(c)(1)-(2).

<sup>75</sup> 33 U.S.C. § 1251 et seq.

<sup>76</sup> 33 U.S.C. § 1362(12).

<sup>77</sup> 33 U.S.C. § 1362(14) (“The term ‘point source’ means any . . . concentrated animal feeding operation . . .”).

<sup>78</sup> *See Rapanos v. United States*, 547 U.S. 715, 724 (2006).

<sup>79</sup> OAR 340-045-0010(18).

state.”<sup>80</sup> Moreover, “industrial waste” is defined to include gaseous waste from “any process of industry, manufacturing, trade, or business.”<sup>81</sup>

In March 2021, a Maryland state court held that the Maryland Department of the Environment (MDE) erroneously concluded that gaseous ammonia emissions are not governed by Maryland’s expansion of the CWA, because Maryland defined “pollutant” as “any liquid, gaseous, solid, or other substance that will pollute any waters of this State.”<sup>82</sup> Additionally, the state defined “discharge” as “the addition, introduction, leaking, spilling, or emitting of a pollutant into the waters of this State.”<sup>83</sup> It was clear to the court that CAFOs in Maryland, particularly CAFOs operating as poultry farms, emitted gaseous ammonia by discharging noxious fumes onto the waters of the State.<sup>84</sup>

It is the same situation in Oregon. The State definitions of pollutant include gases that pollute the state’s waters. CAFOs emit gaseous ammonia into the atmosphere that end up in the water, therefore ammonia emissions should be governed under the CWA.

Caselaw also establishes that ammonia emissions are “additions” of a pollutant within the context of the CWA. In *National Cotton Council of America v. United States Environmental Protection Agency*, the Sixth Circuit considered an EPA rule that treated pesticide residues and excess pesticides, discharged from point sources, as nonpoint source pollutants.<sup>85</sup> The court rejected the rule, establishing that pesticide residues and excess pesticides are additions from a point source.<sup>86</sup> The court emphasized the impropriety of “temporally tying the ‘addition’ (or ‘discharge’) of the pollutant to the ‘point source’[.]”<sup>87</sup> The court held “the relevant inquiry is whether—but for the point source—the pollutants would have been added to the receiving body of water.”<sup>88</sup> In that case, the court concluded “[i]t is clear that but for the application of the pesticide, the pesticide residue and excess pesticide

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<sup>80</sup> OAR 340-045-0010(31) (emphasis added).

<sup>81</sup> OAR 340-045-0010 (10).

<sup>82</sup> *In re Assateague Coastal Trust*, Case No.: 482915-V, slip op., at 9 (Md. Cir. Ct., Mar. 11, 2021).

<sup>83</sup> *Id.* (emphasis in original).

<sup>84</sup> *Id.* at 10.

<sup>85</sup> *Nat’l Cotton Council of Am. v. U.S. EPA*, 553 F.3d 927, 934 (6th Cir. 2009).

<sup>86</sup> *Id.* at 936-40.

<sup>87</sup> *Id.*

<sup>88</sup> *Id.* at 940 (citing *S. Florida Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 103 (2004)).

would not be added to the water[.]”<sup>89</sup> Thus, “the pesticide residue and excess pesticide are from a ‘point source.’”<sup>90</sup>

Additionally, in *No Spray Coalition, Inc. v. City of New York*, a district court in New York held that the spraying of pesticides over navigable water can constitute an addition of a pollutant.<sup>91</sup> According to the court, it did not matter that the pesticide “is initially sprayed into the air as a fine mist” as long as “the mist descends downward into the water.”<sup>92</sup> The court further explained that it “would be unreasonable to distinguish between a sprayer releasing a fine mist pollutant into the atmosphere over the water and a pipe that released the same single flow of pollutant directly into water.”<sup>93</sup> That is because polluters would only need “to attach an airborne mist blower or hydraulic sprayer to their pipe to discharge a pollutant over the water in order to escape liability or regulation.”<sup>94</sup>

These cases demonstrate that the atmospheric deposition of ammonia from CAFOs in Oregon is an addition of a pollutant under the CWA. Just like the pesticides at issue in *National Cotton Council*, but for the CAFOs emitting the ammonia, the ammonia residue would not be added to the waters of Oregon. And just like the “fine mist” of pesticides in *No Spray Coalition* that “descends downward into the water,” so too does the ammonia emitted by the CAFOs in Oregon. The time lapse between the ammonia emissions discharge from the CAFOs and the deposition into the waters is irrelevant, as there is no “temporal requirement” in the CWA.<sup>95</sup>

Ammonia pollution is, and continues to be, a highly toxic problem for the waters of Oregon. The ammonia emissions that are emitted by the CAFOs that will be covered under the Draft General Permit are emitting ammonia and discharging it into the waters of the United States. The Draft General Permit should therefore be modified to include proper regulation of ammonia discharges as required by the CWA.

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<sup>89</sup> *Id.*

<sup>90</sup> *Id.*

<sup>91</sup> *No Spray Coal., Inc. v. City of N.Y.*, No. 00 Civ. 5395 (GBD), 2005 WL 1354041, \*4 (S.D.N.Y., June 8, 2005).

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*

<sup>95</sup> *Nat’l Cotton Council*, 553 F.3d at 939.

**D. The Draft General Permit fails to require Best Professional Judgment limits for CAFO pollutants with no Effluent Limitation Guidelines.**

In the Draft General Permit, ODA essentially treats CAFO waste as only containing nutrients that are beneficial to crop production if applied at agronomic rates.<sup>96</sup> Under this approach, any other pollutants of concern that may be found in CAFO waste, but that are not beneficial to or utilized by crops, are not considered or regulated under the NPDES program. Yet CAFO waste contains a variety of other pollutants including solids (feed, hair, feathers, etc.); salts; trace elements such as arsenic, copper, selenium, zinc, cadmium, molybdenum, nickel, lead, iron, manganese, aluminum, and pesticide ingredients; pathogens (bacteria, viruses, protozoa, fungi, prions, and helminths); antimicrobials (antibiotics and vaccines); hormones (both natural and synthetic); pesticides; soaps; and disinfectants.<sup>97</sup>

To address pollutants for which no effluent limitation guidelines (ELGs) have been established, EPA regulations require case-by-case effluent limitations based on Best Professional Judgment (BPJ).<sup>98</sup> ODA may establish BPJ limits based on the same factors the Act requires EPA to consider in developing ELGs.<sup>99</sup> BPJ effluent limitations can take the form of numerical limitations or best management practices.

EPA guidance further clarifies that permitting agencies must establish BPJ limits for pollutant discharges not covered by the applicable ELGs:

Where EPA has not promulgated technology-based effluent guidelines for a particular class or category of industrial discharger, *or where the technology-based effluent guidelines do not address all wastestreams or pollutants*

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<sup>96</sup> See Draft General Permit Section S4.A (only requiring manure to be tested for phosphorus and nitrogen); Draft General Permit Section S2.A (establishing effluent limits only for *E. coli*, Nitrate plus Nitrite Nitrogen, and Total Phosphorus).

<sup>97</sup> EPA, OFFICE OF WATER, 820-R-13-002, LITERATURE REVIEW OF CONTAMINANTS IN LIVESTOCK AND POULTRY MANURE AND IMPLICATIONS FOR WATER QUALITY 2 (July 2013); AMBER MOORE & JIM IPPOLITO, DAIRY MANURE FIELD APPLICATIONS—HOW MUCH IS TOO MUCH? (Apr. 2009), UNIVERSITY OF IDAHO EXTENSION, <https://www.extension.uidaho.edu/publishing/pdf/CIS/CIS1156.pdf> (discussing soluble salts accumulation and “concern[] about the accumulation of copper (Cu) in the soil because of the application of dairy wastes to agricultural fields”).

<sup>98</sup> 40 C.F.R. § 125.3; 33 U.S.C. § 1342(a)(1) (authorizing EPA to issue permit conditions “necessary to carry out the provisions of the [CWA]”).

<sup>99</sup> EPA, NPDES PERMIT WRITERS’ MANUAL, CHAPTER 5: TECHNOLOGY-BASED EFFLUENT LIMITS, [https://www3.epa.gov/npdes/pubs/chapt\\_05.pdf](https://www3.epa.gov/npdes/pubs/chapt_05.pdf).

*discharged by the industrial discharger, EPA must establish technology-based effluent limitations on a case-by-case basis in individual NPDES permits, based on its best professional judgment or “BPJ.”*

...  
*[A]n authorized state must include technology-based effluent limitations in its permits for pollutants not addressed by the effluent guidelines for that industry. 33 USC § 1314(b); 40 CFR § 122.44(a)(1), 123.25, 125.3. In the absence of an effluent guideline for those pollutants, the CWA requires permitting authorities to conduct the “BPJ” analysis discussed above on a case-by-case basis for those pollutants in each permit.<sup>100</sup>*

CAFOs are capable of discharging a variety of pollutants with no established ELGs. This includes CAFO waste handled at production areas and land applied to fields, as well as discharges of pollutants from CAFO ventilation systems. Many pollutants found in CAFO waste applied to agricultural fields are not subject to agronomic rate considerations because they are not nutrients available for use by crops. Instead, they must be treated as what they are: pollutants that CAFOs produce, handle, and dispose of in ways that potentially result in discharges to jurisdictional waters. These pollutants and those discharged by ventilation systems do not have ELGs and thus require ODA to develop BPJ limitations sufficient to protect against unpermitted discharges to Oregon waters.

**E. The Draft General Permit—which should not even be available to CAFOs with waste digesters—fails to contemplate digestate.**

CAFOs using waste digesters should be ineligible for coverage under the General Permit. An increasing number of CAFOs in Oregon are using or are considering using anaerobic digesters to capture methane from animal waste generated at CAFOs.<sup>101</sup> While the Draft General Permit is silent as to CAFOs that

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<sup>100</sup> James A. Hanlon, Director, EPA Office of Wastewater Management, *National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals (CCR) Impoundments at Steam Electric Power Plants* (Jun. 7, 2010) [Hanlon Memo] (emphasis added). Although this Memorandum discussed coal plant discharge limits, the statutory requirement to establish technology-based limits using BPJ is equally applicable across industries.

<sup>101</sup> See, e.g., *Bovine Manure Tax Credit Program Data*, OR. DEP’T OF AGRIC., <https://data.oregon.gov/Revenue-Expense/Bovine-Manure-Tax-Credit-Program-Dept-of-Agriculture/cdnv-r4ea/data> (last visited Oct. 22, 2021); George Plaven, *Largest Oregon Dairy Plans to Make Natural Gas from Cow Manure*, CAPITAL PRESS (Apr.



use digesters and must manage and dispose of digestate, ODA may not simply authorize the use of digestate—the leftover solid and liquid waste after methane capture—as a fertilizer for land applications under the generic conditions in the Draft General Permit.

Digestate poses heightened risks to water quality, and merely spreading this digestate on fields as though it were no different than undigested manure consequently falls short of best available technology, in violation of the CWA and EPA’s regulations. The United States Department of Agriculture’s Natural Resources Conservation Service warns that nitrogen, phosphorus, and other elements in digestate are more water soluble than in undigested CAFO waste, making it more prone to leaching and runoff and posing a unique risk to waterways.<sup>102</sup>

At a minimum, until EPA or ODA conducts a thorough assessment of the water pollution implications of land applying digestate, and how this affects agronomic rates and other pollution control requirements, ODA should prohibit this use of liquid or solid digestate for facilities covered by the Draft General Permit. It should require individual permits of any facilities with digesters and individually determine the appropriate waste and digestate management and application measures necessary to meet permit effluent limits and other federal and state requirements.

**F. The Draft General Permit fails to prevent the harmful individual and cumulative impacts of CAFOs from disproportionately impacting low-wealth and Black, Indigenous, and People of Color communities.**

CAFOs have a long history of creating environmental injustice, resulting in the impacts from CAFOs not affecting all Oregonians equally. Oregon must ensure that the CAFOs that it permits avoid harming environmental justice communities and violating state and federal laws, including ORS 182.545, DEQ’s Environmental Justice Policy, and Title VI of the federal Civil Rights Act

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30, 2019), [https://www.capitalpress.com/ag\\_sectors/dairy/largest-oregon-dairy-plans-to-make-natural-gas-from-cow-manure/article\\_93c1cd22-6a9c-11e9-aff6-4b6101896103.html](https://www.capitalpress.com/ag_sectors/dairy/largest-oregon-dairy-plans-to-make-natural-gas-from-cow-manure/article_93c1cd22-6a9c-11e9-aff6-4b6101896103.html).

<sup>102</sup> NRCS, Conservation Practice Standard No. 366: Anaerobic Digester, at 6 (“Land application of digester effluent, compared with fresh manure, may have a higher risk for both ground and surface water quality problems. Compounds such as nitrogen, phosphorus, and other elements become more soluble due to anaerobic digestion and therefore have higher potential to move with water.”).

As identified earlier in the Comments, the waste produced by CAFOs “contains antibiotics, hormones, pathogens, heavy metals, and other animal drugs and chemicals that contaminate significant ground and surface water across the country.”<sup>103</sup> CAFOs and their pollutants “are generally unwanted in local communities and are often thrust upon those sectors with the lowest levels of political influence.”<sup>104</sup>

Many studies have shown that nationally a disproportionate number of CAFOs are located in low-income and Black, Indigenous, and People of Color (BIPOC) communities that unfairly bear the brunt of the environmental pollution from this industry.<sup>105</sup> The same is true in Oregon. In Oregon, the majority of CAFOs—and particularly the state’s mega dairy CAFOs—are located in rural Umatilla and Morrow Counties.<sup>106</sup> According to census data, approximately 38% of Morrow County’s population is Hispanic or Latino, and almost 34% of the county’s population speaks a language other than English at home.<sup>107</sup> In Umatilla County, approximately 28% of the population is Hispanic or Latino, and almost 23% of the county’s population speaks a language other than English at home.<sup>108</sup> Both counties are also home to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) reservation and usual and accustomed treaty rights territory.

DEQ and ODA have failed to adequately comply with their obligations under ORS 182.545, DEQ’s Environmental Justice Policy, and Title VI of the federal Civil Rights Act in the Draft General Permit. Commenters therefore request that DEQ and ODA: (1) withdraw the Draft General Permit; (2) develop a process to inform environmental justice communities, including sovereign tribal nations and tribal members, of the Draft General Permit’s impacts; (3) develop a quantitative and qualitative analysis of CAFOs and impacts of facilities issued General Permits on environmental justice communities; (4) incorporate environmental justice considerations in a revised Draft General Permit; and (5) thereafter reissue the Draft General Permit for public comment only after the agencies can ensure that

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<sup>103</sup> Phoebe Gittelsohn et al., *The False Promises of Biogas: Why Biogas Is an Environmental Justice Issue*, ENVTL. J., May 2021, at 5, <https://www.liebertpub.com/doi/pdf/10.1089/env.2021.0025>.

<sup>104</sup> *Id.*

<sup>105</sup> *Id.*

<sup>106</sup> See Or. Dep’t of Agric., *supra* note 31, at 9.

<sup>107</sup> *Quick Facts: Morrow County, Oregon*, U.S. CENSUS BUREAU, <http://www.census.gov/quickfacts/table/PST045215/41049#headnote-js-b> (last visited Oct. 24, 2021).

<sup>108</sup> *Quick Facts: Umatilla County, Oregon*, U.S. CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/umatillacountyoregon,US/PST045219> (last visited Oct. 24, 2021).

BIPOC and low-wealth communities are not disproportionately harmed as a result of the General Permits issued by the agencies.

Commenters also reiterate that many of the items identified in other sections of these comments are necessary to protect communities that live and work near the permitted CAFOs from the staggering amounts of waste that the facilities generate. For example, the Draft General Permit must require rigorous government oversight, monitoring, and reporting that would allow the state and the public to understand the full extent to which pollutants from permitted facilities are getting into the air and water and making people sick. Without those measures, the Draft General Permit will continue to fall short of what is needed to protect human health and the environment.

**1. ORS 182.545, Oregon’s Environmental Justice Statute, and DEQ’s Environmental Justice Policy**

In 2007, SB 420 established Oregon’s Environmental Justice Task Force and environmental justice guidelines for the state’s natural resource agencies. Under that law, ODA and DEQ have a legal duty to consider the facility’s impacts on BIPOC and low-wealth communities. Because it failed to do so here, it is in violation of this law.

Pursuant to ORS 182.545,

In order to provide greater public participation and to ensure that all persons affected by decisions of the natural resources agencies have a voice in those decisions, each natural resource agency shall:

- (1) In making a determination whether and how to act, consider the effects of the action on environmental justice issues.
- (2) Hold hearings at times and in locations that are convenient for people in communities that will be affected by the decisions stemming from those hearings.
- (3) Engage in public outreach activities in the communities that will be affected by decisions of the agency.
- (4) Create a citizen advocate position that is responsible for:
  - (a) Encouraging public participation;
  - (b) Ensuring that the agency considers environmental justice issues; and

- (c) Informing the agency of the effect of its decisions on communities traditionally underrepresented in public processes.

DEQ and ODA are “Natural Resource Agencies” under ORS 182.535. “Environmental justice” is not defined under the law, but according to the staff measure summary to the Committee on Environment and Natural Resources during the consideration and ultimate passage of the law, “[e]nvironmental justice issues have generally been defined to include problems that have a disproportionately negative impact on minority and low-income communities.”<sup>109</sup>

Complementing this law, in 1997 DEQ established an Environmental Justice Policy (DEQ EJ Policy) to ensure involvement of affected communities in its decision making, to disseminate and make accessible relevant information, to provide opportunities for public participation by affected communities, to foster community partnerships, and to pursue innovative responses to problems that center equity to effected communities.<sup>110</sup>

First, it is unclear the extent to which DEQ and ODA “consider[ed] the effects of the action on environmental justice issues” in revising the draft permit.<sup>111</sup> This information should be available and DEQ and ODA should develop and make available to the public a quantitative and qualitative analysis of CAFOs and impacts of facilities issued General Permits on environmental justice communities.

Second, the public hearing on the proposed CAFO General Permit was held on Monday, October 18 at 1:30pm—a time when most people are at work. Holding only one hearing in the middle of the work-day before many people’s work hours have finished effectively prevents them from participating in these meetings and having their voices heard, in violation of ORS 182.545(2).<sup>112</sup>

Third, while we were glad to see that the agencies had translation services available during the public hearing and accepted verbal comments in Spanish, it does not appear that any of the actual materials relevant to this public commenting period and hearing (including the power point presentation relied on during the public hearing process) were made available in any language other than English.

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<sup>109</sup> S. Comm. on Env’t. and Nat. Res., Staff Measure Summary, S.B. 420, 74th Or. Legis. Assemb., 2007 Reg. Session, <https://olis.oregonlegislature.gov/liz/2007R1/Downloads/MeasureAnalysisDocument/5135>.

<sup>110</sup> OR. DEP’T OF ENVTL. QUALITY, ENVIRONMENTAL JUSTICE POLICY (1997), <https://www.oregon.gov/deq/FilterDocs/DEQeJpolicy.pdf> (DEQ EJ Policy).

<sup>111</sup> ORS 182.545(1); *see also* DEQ EJ Policy, *supra* note 110.

<sup>112</sup> *See also* DEQ EJ Policy, *supra* note 110.

Since a significant number of people living in the areas around CAFOs in Oregon speak other languages, including Spanish and the languages spoken by the CTUIR, DEQ and ORS also did not reasonably comply with the requirements of ORS 182.545(3) to “[e]ngage in public outreach activities in the communities that will be affected by decisions of the agency.”<sup>113</sup>

There is an option on the last page of the Notice of Public Hearing that in English provides, “[p]lease notify ODA of any special physical or language accommodations or if you need information in large print, Braille, or another format,” but that is simply inadequate to satisfy the agencies environmental justice community engagement obligations as it implies that the person has enough proficiency in English to read that provision, which is not an assumption that the agencies should be making.<sup>114</sup> Rather, as ODA has done with regards to the “One position available on the CAFO Advisory Committee” announcement on its website that appears just below its notification about the Draft General Permit, the notification itself should appear on ODA’s website in at least English and Spanish, and then the materials should be made available and immediately accessible through the online notification in at least English and Spanish.<sup>115</sup> If people are unable to readily understand their participation rights and the substantive terms of permitting materials, they cannot adequately comment on the activities of facilities that affect their everyday lives.

## 2. Title VI of the Federal Civil Rights Act

DEQ and ODA must fulfill their obligations to consider the direct and cumulative impacts of this polluting industry on environmental justice communities in finalizing the Draft General Permit. If they do not, in addition to finalizing a permit that might disproportionately harm these communities, they risk violating Title VI of the federal Civil Rights Act of 1964.

Title VI of the Civil Rights Act provides:

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in,

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<sup>113</sup> See also *id.*

<sup>114</sup> OR. DEP’T OF ENVTL. QUALITY & OR. DEP’T OF AGRIC., NOTICE OF PUBLIC HEARING AND OPPORTUNITY FOR COMMENT, REQUEST FOR COMMENTS ON PROPOSED CONFINED ANIMAL FEEDING OPERATION WATER QUALITY GENERAL PERMIT RENEWAL (Sept. 16, 2021), <https://www.oregon.gov/oda/programs/NaturalResources/Documents/CAFOPublicNotices/2021/NPDESPermitPublicHearing.pdf>.

<sup>115</sup> *Confined Animal Feeding Operations (CAFOs)*, OR. DEP’T OF AGRIC., <https://www.oregon.gov/oda/programs/naturalresources/pages/cafo.aspx> (last visited Oct. 24, 2021).

denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.<sup>116</sup>

EPA regulations prohibit a recipient of federal funds from using criteria or methods of administering a program or activity which have the effect of subjecting individuals to discrimination.<sup>117</sup> Title VI imposes on states an affirmative obligation to include consideration of Title VI criteria in permitting decisions.<sup>118</sup> As a recipient of federal funds for implementing the CAFO NPDES program coincident with the issuance of this General Permit, DEQ and ODA are required to administer the NPDES permitting scheme without subjecting low-wealth and BIPOC communities to discrimination; if they do not, they risk losing said funds. EPA recently conducted its own analysis of CAFOs' locations in relation to environmental justice populations, and found areas at risk of disproportional impacts from virtually every type of CAFO—broiler, egg, turkey, hog, beef, and dairy.<sup>119</sup>

Complementary to the obligations laid out in Oregon state law, all materials should be provided in languages other than English and efforts must be taken to ensure that low-wealth and BIPOC communities do not disproportionately bear the burden of pollution from this industry. If these communities do not have the adequate ability to understand and comment on these materials, they are unlawfully prevented their participation rights under Title VI. Beyond language barriers, the timing of public meetings are also disproportionately inaccessible to low-income communities and communities of color.

Further, DEQ and ODA are likely violating Title VI if they fail to exercise their authority to provide adequate protections for the health and welfare of surrounding communities. The agencies know the risks and impacts of permitting CAFOs and their waste disposal methods, especially in critical groundwater areas. To protect surrounding communities, the agencies must strengthen the Draft General Permit in the ways previously discussed<sup>120</sup> and ensure that the Draft

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<sup>116</sup> 42 U.S.C. § 2000d (2018).

<sup>117</sup> 40 C.F.R. § 7.35(b).

<sup>118</sup> *S. Camden Citizens in Action v. New Jersey Dept. of Env'tl. Protection*, 145 F. Supp. 2d 446, 476 (D. N.J. 2001).

<sup>119</sup> EPA OFFICE OF WATER, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONCENTRATED ANIMAL FEEDING OPERATION (CAFO) REPORTING RULE, ANALYSIS UNDER EXECUTIVE ORDER 12898: FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS 4 (Oct. 3, 2011).

<sup>120</sup> *See supra* section II.A–F.

General Permit includes the additional terms described above,<sup>121</sup> such as representative monitoring and regulation of ammonia discharges.

Sincerely,

**STAND UP TO FACTORY FARMS**

*and*

**Elisabeth Holmes**

Staff Attorney

**WILLAMETTE RIVERKEEPER**

cc: Environmental Protection Agency, Region 10  
Nicholas Peak, Regional Ag Advisor  
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Enclosures: Attachments 1–4

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<sup>121</sup> See *supra* sections III.A–E.

*Attach. 1*



**BEFORE THE  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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Petition for Emergency Action Pursuant to )  
the Safe Drinking Water Act § 1431, 42 )  
U.S.C. § 300i, to Protect Citizens of the )  
Lower Umatilla Basin in Oregon from )  
Imminent and Substantial Endangerment to )  
Public Health Caused by Nitrate )  
Contamination of Public Water Systems and )  
Underground Sources of Drinking Water )

EPA Docket No. \_\_\_\_\_  
January 16, 2020

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**Submitted on Behalf of Petitioners Food & Water Watch, Columbia Riverkeeper, Eileen Laramore, Friends of Family Farmers, Humane Voters Oregon, WaterWatch of Oregon, Animal Legal Defense Fund, Center for Biological Diversity, and Center for Food Safety**

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To: Administrator Andrew R. Wheeler  
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## I. INTRODUCTION

The undersigned Petitioners respectfully petition the United States Environmental Protection Agency (“EPA”) to exercise its emergency powers established in Section 1431 of the Safe Drinking Water Act (“SDWA” or “the Act”), 42 U.S.C. § 300i, to address groundwater contamination that has presented, and continues to present at ever-increasing levels, an imminent and substantial endangerment to the health of the residents of the Lower Umatilla Basin (“LUB”) in Oregon. This petition is based primarily on data that have been compiled by the Oregon Department of Environmental Quality (“DEQ”), the Oregon Health Authority (“OHA”), Oregon Department of Agriculture (“ODA”), Umatilla and Morrow County Soil and Water Conservation Districts, and the Lower Umatilla Basin Ground Water Management Area Committee (“LUBGWMA Committee”), all of which demonstrate that nitrate concentrations in public water systems and underground sources of drinking water have routinely exceeded both federal and state drinking water standards, putting the health of area residents at serious risk. Every methodology employed by Oregon officials confirms that not only have past, voluntary measures relied on by the State been unsuccessful at reducing nitrate concentrations in crucial drinking water sources to below federal and state standards, but also that the unambiguous and unabated trend is towards ever greater levels of nitrate contamination. Instead of changing tack based on these findings and mandating actions necessary to improve water quality, Oregon officials recently doubled down on their voluntary-only approach, as outlined in the now-operative Second Lower Umatilla Basin Groundwater Management Area Local Action Plan (“Second Action Plan”).<sup>1</sup>

As explained in this Petition, the well-documented nitrate contamination of eastern Oregon’s LUB drinking water necessitates prompt and decisive EPA emergency action under the SDWA. Elevated levels of nitrate in drinking water is known to increase the risk of a wide range of very serious health problems, including birth defects, “blue-baby syndrome,” various cancers, thyroid disease, and other maladies.<sup>2</sup> This contamination poses an imminent and substantial threat to human health, and the problem is only getting worse. Despite Oregon applying for and being granted “primacy” under the SDWA, state and local officials have failed to do what is needed to remediate this contamination and instead have allowed nitrate concentrations in the area’s drinking water to rise over the span of three decades. Oregon officials have effectively abandoned their responsibility to protect Oregon’s citizens by merely repackaging their failed voluntary-only approach, which continues to put control in the hands of the very polluters that have turned a once pristine source of drinking water into a pervasive threat to human health. EPA is fully empowered under the SDWA to take emergency action to protect human health in the LUB given present circumstances.

Therefore, Petitioners request that EPA act to protect human health and effectuate the goals of the SDWA in the LUB. Specifically, Petitioners request that EPA, at a minimum, provide a safe alternative source of drinking water for the impacted communities so long as dangerous nitrate contamination persists, further monitor drinking water quality and identify the

<sup>1</sup> Lower Umatilla Basin Groundwater Management Committee, *Second Lower Umatilla Basin Groundwater Management Area Local Action Plan* (updated Feb. 12, 2019) (hereinafter “Second Action Plan, App A”) (included here as Appendix A).

<sup>2</sup> See *infra* Section IV.D.1.

specific entities and land use practices causing the contamination, and issue orders necessary to begin reducing nitrate loadings and eventually return the area's underground aquifers to a safe and drinkable condition.

## **II. INTERESTS OF PETITIONERS**

Food & Water Watch (“FWW”) is a national, nonprofit membership organization that mobilizes regular people to build political power to move bold and uncompromised solutions to the most pressing food, water, and climate problems of our time. FWW uses grassroots organizing, media outreach, public education, research, policy analysis, and litigation to protect people's health, communities, and democracy from the growing destructive power of the most powerful economic interests.

Columbia Riverkeeper's (“Riverkeeper”) mission is to protect and restore the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean. Riverkeeper works with people in dozens of communities—rural and urban—with the same goals: protecting the health of their families and the places they love. Riverkeeper enforces environmental laws to stop illegal pollution, protect salmon habitat, and challenge harmful fossil fuel terminals. Riverkeeper uses policy advocacy, litigation, and community organizing, partnering with Columbia River communities to protect clean water.

Eileen Laramore in her individual capacity. Ms. Laramore is a resident of Umatilla County who has a long history of engagement in the area. Her activities in Umatilla County include: founder and Executive Director of Friends of the Oxbow Property, Umatilla County, which works on a 222-acre restoration site on the Umatilla River near Hermiston, Oregon; founder and Executive Director of Tour of Knowledge, a grassroots citizen group that toured area facilities and sites that affected regional natural resources (disbanded in 2017); Master Gardner in Marion and Umatilla counties; and member of Friends of the Columbia River Gorge. Ms. Laramore also has an extensive history of civic service in the area that includes being Public Representative on the Umatilla Basin Critical Groundwater Area Task Force; Co-Chair of the Rural, Residual and Open Spaces Committee for the Lower Umatilla Basin Groundwater Management Area; Board Member on the Umatilla County Invasive Weed Committee (represented Hermiston, Oregon); and an attendee of Oregon Hanford Cleanup board meetings for two years.

Friends of Family Farmers (“FoFF”) is a grassroots, nonprofit organization based in Oregon with more than 8000 supporters from across the state. FoFF brings together farmers and citizens to shape and support socially and environmentally responsible family-scale agriculture in Oregon. We build a strong and united voice for Oregon's independent family farmers, food advocates, and concerned citizens who are working to foster an approach to agriculture that respects the land, treats animals humanely, and sustains local communities. It is our belief that every person — urban and agrarian, farmer and eater — has the ability to make choices that can help regenerate our food system.

Humane Voters Oregon (“HVO”) is an Oregon non-profit organization advocating in Oregon's political process and elections for improved animal welfare. HVO also participates in

selected administrative and legal proceedings, and promote policies, that improve human health and the environment while also improving animal welfare.

WaterWatch of Oregon protects and restores natural flows in Oregon rivers and advocates for wise and equitable management of all Oregon water resources, including groundwater.

The Animal Legal Defense Fund is a national nonprofit organization founded in 1979 in Cotati, California. ALDF's mission is to protect the lives and advance the interests of animals through the legal system. Advocating for effective oversight and regulation of CAFO development, expansion, and pollution across the United States is one of ALDF's central goals, which it achieves by filing lawsuits, administrative comments, and rulemaking petitions to increase legal protections for animals and communities affected by CAFOs. ALDF conducts this work on behalf of itself and more than 235,000 members and supporters throughout the United States, including over 50 in Eastern Oregon. Through these efforts, ALDF seeks to ensure transparency in the CAFO system, which is paramount to its ability to protect farmed animals and ALDF members from CAFOs' immensely harmful effects.

The Center for Biological Diversity ("the Center") is a non-profit, public interest environmental organization with more than 1.6 million members and online activists that is dedicated to the protection of native species and their habitats through science, policy, and environmental law. For decades the Center has worked to protect imperiled plants and wildlife, open spaces, and air and water quality, as well as to preserve the overall quality of life for people and animals. The Center and its members and supporters are concerned about the fate of imperiled species, including water-dependent species and their habitats, and alarmed by the increasing rate of extinction and loss of biological diversity across the United States.

Center for Food Safety ("CFS") is a national non-profit organization with a mission to empower people, support farmers, and protect the environment from industrial agriculture. CFS represents nearly 1 million members and supporters nationwide and tens of thousands in the Pacific Northwest, including Oregon. CFS uses education, policy and legislation, and impact litigation to address the negative effects to public health and the environment from harmful food production technologies, and supports ecological food production, like organic and beyond. CFS's regional program in the Pacific Northwest and Oregon specifically focuses on the negative impacts to community health, farmers, and wildlife from animal factories.

### **III. LEGAL BACKGROUND OF THE SAFE DRINKING WATER ACT AND EPA'S EMERGENCY POWERS**

Congress enacted the SDWA as a powerful tool for protecting drinking water resources throughout the United States. Under the Act, EPA and state authorities are encouraged to work together to ensure access to safe drinking water. On the federal level, the SDWA "requires EPA to protect the public from . . . drinking water contaminants."<sup>3</sup> States may apply for and EPA may grant "primacy" to states, which shifts significant authority and responsibility to state officials to

<sup>3</sup> *City of Portland v. EPA*, 507 F.3d 706, 709 (D.C. Cir. 2007).

implement the SDWA.<sup>4</sup> To assume primacy, the state is supposed to adopt regulations at least as stringent as EPA's national requirements, develop adequate procedures for enforcement and levying penalties, conduct inventories of water systems, maintain records and compliance data, and develop a plan for providing safe drinking water under emergency conditions.<sup>5</sup> While a state granted primacy has responsibility to implement the SDWA's provisions in that state, EPA retains emergency powers under Section 1431 of the Act to take actions necessary to abate imminent and substantial endangerment to the health of persons caused by drinking water contamination when state officials have failed to effectively do so on their own.

For EPA to exercise its Section 1431 authority, two conditions must be met. First, the EPA must have received "information that a contaminant which is present in or likely to enter a public water system or an underground source of drinking water, ... may present an imminent and substantial endangerment to the health of persons."<sup>6</sup> Second, EPA must have received information that "appropriate State and local authorities have not acted to protect the health of such persons" in a timely and effective manner.<sup>7</sup>

The SDWA defines a contaminant as "any physical, chemical, biological, or radiological substance or matter in water."<sup>8</sup> While this broad definition does not require a substance to be regulated under the Act in order to be classified as a "contaminant," nitrate is listed as a contaminant with an established maximum contaminate level ("MCL") of 10 mg/L.<sup>9</sup> Establishing nationwide, health-based MCLs is central to EPA's role in protecting drinking water in the U.S. under the SDWA.<sup>10</sup> An MCL is the "maximum permissible level of a contaminant in water which is delivered to any user of a public water system."<sup>11</sup> MCLs are promulgated after a determination by EPA based on the best available, peer-reviewed science and data that regulating the contaminant will reduce a threat to public health.<sup>12</sup>

An endangerment from a contaminant is "imminent" if conditions that give rise to it are present, even if the actual harm may not be realized for years.<sup>13</sup> Congress intended that EPA's exercise of its emergency powers "must occur early enough to prevent the potential hazard from

<sup>4</sup> 42 U.S.C. § 300g-2.

<sup>5</sup> MARY TIEMANN, CONG. RESEARCH SERV., RL31243, SAFE DRINKING WATER ACT (SDWA): A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 7 (Mar. 1, 2017).

<sup>6</sup> 42 U.S.C. § 300i; EPA Memorandum, Updated Guidance on Emergency Authority under Section 1431 of the Safe Drinking Water Act 8 (May 30, 2018), <https://www.epa.gov/sites/production/files/2018-09/documents/updatedguidanceonemergencyauthorityundersection1431sdwa.pdf> (last visited Nov. 4, 2019) (hereinafter "Emergency Authority Guidance, App. B") (included here as Appendix B).

<sup>7</sup> 42 U.S.C. § 300i; Emergency Authority Guidance, App. B at 12-13.

<sup>8</sup> 42 U.S.C. § 300f(6).

<sup>9</sup> 40 C.F.R. § 141.62(b).

<sup>10</sup> 42 U.S.C. § 300g-1(b)(4)(B). Before establishing an MCL, EPA first identifies a "maximum contaminant level goal" (MCLG) indicating the level at which no known adverse health consequences will occur. *Id.* § 300g-1(b)(4)(A). The MCL is then set as close to the MCLG as is feasible when using "the best technology, treatment techniques and other means which the Administrator finds . . . are available (taking cost into consideration)." *Id.* § 300g-1(b)(4)(D).

<sup>11</sup> *Id.* § 300f(3).

<sup>12</sup> *Id.* § 300g-1(b)(1)(A), 300g-1(b)(3)(A).

<sup>13</sup> SDWA Emergency Authority Guidance, App. B at 8 (citing *U.S. v. Conservation Chemical Co.*, 619 F. Supp. 162, 193-194 (W.D. Mo. 1985)).

materializing.”<sup>14</sup> Courts have established that an “imminent hazard” may be declared at any point in a chain of events that may ultimately result in harm to the public.<sup>15</sup> Information presented to EPA need not demonstrate that residents are actually drinking contaminated water and becoming ill to warrant EPA exercising its Section 1431 emergency authority.<sup>16</sup> In other words, an actual injury need not have occurred for EPA to act, and to wait for such actual injury to befall the public would be counter to the protectionary intent behind the SDWA. Thus, while the threat or risk of harm must be “imminent” for EPA to act, actual and documented harm itself need not be.<sup>17</sup> While endangerments are readily determined to be imminent where MCL violations expose sensitive populations to a contaminant, contaminants that lead to chronic health effects may also be considered to cause “imminent endangerment.”<sup>18</sup> In such cases, it is appropriate to consider the length of time a population has been or could be exposed to a contaminant.<sup>19</sup>

An endangerment is “substantial” “if there is a reasonable cause for concern that someone may be exposed to a risk of harm.”<sup>20</sup> Congress determined that an endangerment may be regarded as sufficiently substantial where there is “a substantial likelihood that contaminants capable of causing adverse health effects will be ingested by consumers if preventative action is not taken.”<sup>21</sup> As with imminence, EPA has made clear that actual reports of human illness resulting from contaminated drinking water are not necessary to establish substantial endangerment.<sup>22</sup>

EPA granted Oregon primacy under the SDWA in 2009, and Oregon has promulgated a framework similar to EPA’s MCLs as well as threshold triggers pursuant to the Oregon Groundwater Protection Act of 1989.<sup>23</sup> These triggers, when met or exceeded at least partly because of nonpoint source activities, require the state to investigate and declare a “groundwater management area” (“GWMA”) to address the contamination.<sup>24</sup> For most contaminants, Oregon law sets the trigger level at 50% of the national MCL, but for nitrate contamination it established a less protective 70% threshold.<sup>25</sup> Therefore, when nitrate levels meet or exceed 7 mg/L (70% of the 10 mg/L MCL), Oregon officials are required to establish a GWMA.

Because water quality testing has consistently found concentrations of nitrates in excess of the state trigger level, Oregon officials designated the Lower Umatilla Basin Groundwater Management Area (“LUBGWMA”) in 1990.<sup>26</sup> The LUBGWMA “was established to allow for the identification and implementation of practices that will reduce nitrate loading and ultimately

<sup>14</sup> H. Rpt. 93-1185, pp. 35-36 (1974).

<sup>15</sup> SDWA Emergency Authority Guidance, App. B at 8 n.15 (citing cases).

<sup>16</sup> See *Trinity Am. Corp. v. EPA*, 150 F.3d 389, 399 (4th Cir. 1998).

<sup>17</sup> Emergency Authority Guidance, App. B at 8.

<sup>18</sup> SDWA Emergency Authority Guidance, App. B at 8.

<sup>19</sup> *Id.*

<sup>20</sup> See SDWA Emergency Authority Guidance, App. B at 11.

<sup>21</sup> H. Rpt. 93-1185, p. 36 (1974).

<sup>22</sup> See SDWA Emergency Authority Guidance, App. B 11 (citing *United States v. North Adams*, 777 F. Supp. 61, 84 (D. Mass. 1991)).

<sup>23</sup> DEQ, *SDWA Regulatory Overview*, <https://www.oregon.gov/deq/wq/programs/Pages/DWP-Regulatory-Overview.aspx> (last visited Nov. 4, 2019).

<sup>24</sup> Second Action Plan, App. A at 2.

<sup>25</sup> ORS 468B.180.

<sup>26</sup> LUBGWMA Committee, <https://lubgwma.org/> (last visited Nov. 4, 2019).

reduce groundwater nitrate concentrations below 7 mg/L.”<sup>27</sup> The designation has remained in effect ever since because the state has been unable to reduce nitrate contamination to within safe levels.

Oregon also established the LUBGWMA Committee to accomplish the task of bringing the area’s drinking water back below the 7 mg/L trigger level. The Committee is an official body comprising local residents and government officials that represent certain interests within the basin,<sup>28</sup> and is responsible for implementation of Action Plans intended to achieve various goals that, if met, should bring water quality within target nitrate concentrations. DEQ designated the Morrow and Umatilla County Soil and Water Conservation Districts to lead development of the First Action Plan, and then the Morrow County Soil and Water Conservation District to develop the Second Action Plan.<sup>29</sup> The First Action Plan was finalized in 1997, and dictated LUBGWMA efforts for more than twenty years. The Second Action Plan, which Morrow County and DEQ finalized in early 2019, is now the operative Action Plan for the LUBGWMA.<sup>30</sup>

Yet, even where, as in Oregon, EPA has granted a state primacy, it retains permanent emergency powers to abate present or likely contamination of public water systems (“PWSs”) or underground sources of drinking water (“USDWs”) when such contamination poses an imminent and substantial threat to human health and the state “ha[s] not acted to protect the health of [endangered] persons.”<sup>31</sup>

EPA’s Section 1431 authority extends to contaminated PWSs or USDWs that pose a threat to human health,<sup>32</sup> including sources that supply private wells.<sup>33</sup> EPA defines a USDW as an aquifer or part of an aquifer “(1) [w]hich supplies any public water systems; or (2) which contains a sufficient quantity of ground water to supply a public water system; and (i) currently supplies drinking water for human consumption.”<sup>34</sup> A PWS is one that provides water for human consumption and “has at least fifteen service connections or regularly serves at least twenty-five individuals.”<sup>35</sup>

Groundwater supplies almost all of the drinking water in the LUBGWMA, where numerous private wells and 59 public water systems serve tens of thousands of residents.<sup>36</sup> Therefore, these underground aquifers qualify as USDWs, and both the USDWs and PWSs in the area are within the purview of the SDWA.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> Second Action Plan, App. A at 6.

<sup>30</sup> LUBGWMA Committee, Action Plans and Annual Reports, <https://lubgwma.org/draft-action-plan/> (last visited Nov. 4, 2019).

<sup>31</sup> 42 U.S.C. § 300i(a).

<sup>32</sup> 42 U.S.C. § 300i.

<sup>33</sup> Emergency Authority Guidance, App. B at 7-8.

<sup>34</sup> 40 C.F.R. § 144.3.

<sup>35</sup> 42 U.S.C. § 300f(4)(A).

<sup>36</sup> See DEQ Water Quality Division, Analysis of Groundwater Nitrate Concentrations in the Lower Umatilla Basin Groundwater Management Area 44 (Feb. 23 2012) (hereinafter “2012 Nitrate Report, App. C”) (included here as Appendix C) (noting that 58 of the 59 active public water systems rely on groundwater, and that the City of Hermiston is almost entirely supplied by groundwater but for one food processing operation that uses surface water).



To abate endangerment to human health that arises despite a state's efforts to curtail it, Congress authorized EPA, among other things, to issue "such orders as may be necessary to protect the health of persons who are or may be users of" the affected drinking water supplies and to commence civil enforcement actions against entities causing threats to public health by contaminating drinking water supplies.<sup>37</sup>

#### **IV. DRINKING WATER CONTAMINATION IN THE LUBGWMA CONSTITUTES AN ENDANGERMENT UNDER THE SDWA AND NECESSITATES EMERGENCY ACTION BY EPA**

Widespread nitrate contamination of critical drinking water resources in the LUBGWMA is ongoing and is found at increasing concentrations with each new round of water quality testing. The region's hydrogeology, paired with pervasive nitrogen-intensive land use practices, has created a dangerous situation where tens of thousands of people are using and depending on drinking water that may be dangerously polluted. The cause of the ongoing endangerment is no mystery; Oregon officials know that large-scale animal agriculture and nutrient management practices in the LUBGWMA are primarily to blame for the region's nitrate problem.

EPA emergency action is necessary in the LUBGWMA because nitrate levels in the area's drinking water pose an imminent and substantial risk to human health, which Oregon officials have been unable or unwilling to remedy almost 30 years after becoming aware of the contamination.<sup>38</sup> Dangerous levels of nitrate pollution are present and are likely to increase in PWSs and USDWs absent emergency action by EPA. Congress enacted, and later strengthened, the SDWA so that EPA could protect public health in just these types of situations.<sup>39</sup> While state and local authorities have attempted to address nitrogen pollution through outreach, public education, and voluntary measures, the area's continually rising levels of contamination pose an increasing risk to public health, demonstrating that these actions are insufficient. Furthermore, Oregon's officials are in the process of permitting yet another massive concentrated animal feeding operation ("CAFO") in the LUBGWMA. This facility is likely to exacerbate the current public health crisis by introducing even more nitrogen pollution into the area.<sup>40</sup> Therefore, EPA action is appropriate and necessary.<sup>41</sup>

<sup>37</sup> Emergency Authority Guidance, App. B at Attachment 2.

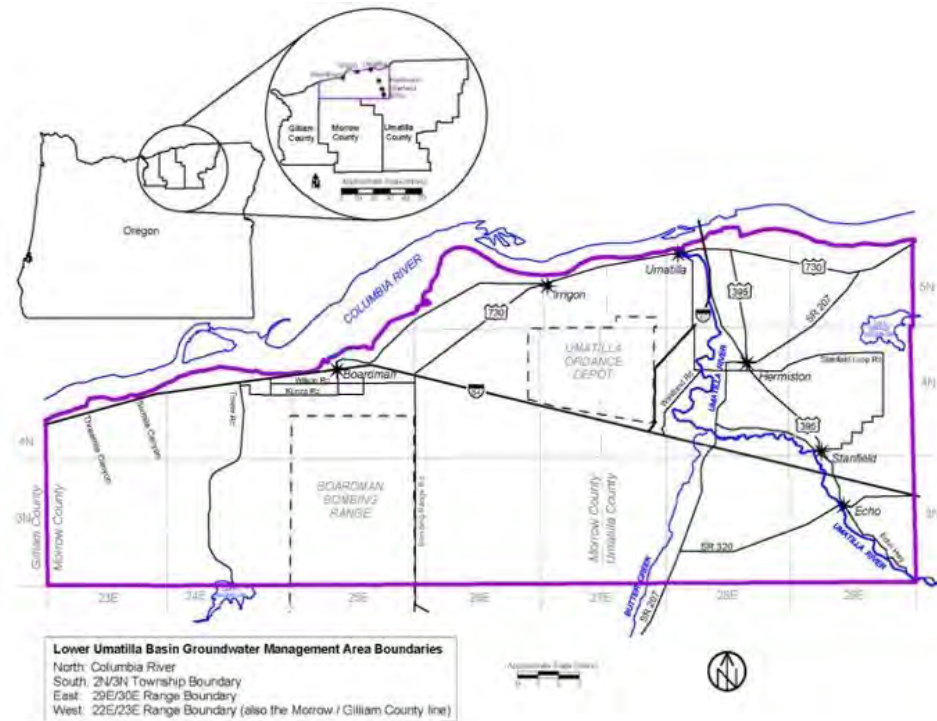
<sup>38</sup> See, e.g., Second Action Plan, App. A at 26, 30, 33, 34, 36 (acknowledging that nitrate levels are generally on the rise and that the state has not met the First Action Plan's goals of reducing nitrate levels to within the standards required by EPA and Oregon law to protect human health).

<sup>39</sup> See 42 U.S.C. § 300i; P.L. 99-339, 100 Stat. 642 (extending EPA's emergency authority to cover contamination of USDW as well as PWS, and adding to the actions EPA can take to remedy imminent and substantial endangerments).

<sup>40</sup> See *infra* pp. 13, 16-17.

<sup>41</sup> See *Cnty. Ass'n for Restoration of the Env't v. George & Margaret LLC*, 954 F.Supp. 2d 1151, 1154 ("EPA Administrator may 'take action necessary to protect the public's health from an imminent and substantial endangerment created by contaminants in a public water system or an underground source of drinking water'" (quoting *W.R. Grace & Co. v. EPA*, 261 F.3d 330, 338-39 (3d Cir. 2001))).

**Fig. 1, Location and Boundaries of the LUBGWMA**



**A. The LUBGWMA’s Hydrogeology Makes the Area’s Drinking Water Particularly Vulnerable to Nitrate Pollution**

The widespread groundwater contamination in the LUBGWMA can be attributed in part to the hydrogeology of the region, which is particularly susceptible to nitrate pollution. The principal aquifers of the LUBGWMA occur in alluvial sands and gravels, which overlie a sequence of basalt lavas collectively known as the Columbia River Basalt Group.<sup>42</sup> The alluvial aquifer and two or three upper basalt aquifers are the principal sources of domestic and municipal drinking water in the basin.<sup>43</sup> Above these shallow aquifers lie porous, sandy soils, which are subject to high rates of permeability when exposed to moisture. While the region receives relatively low amounts of rainfall (only 8 to 10 inches annually), widespread irrigation of agricultural lands brings large volumes of water to these permeable soils, allowing contaminants to reach groundwater in a matter of months.<sup>44</sup> These conditions create a significant risk of nitrate leaching into and contaminating groundwater; 88% of the area has high or moderately high nitrate leaching potential under irrigated conditions.<sup>45</sup>

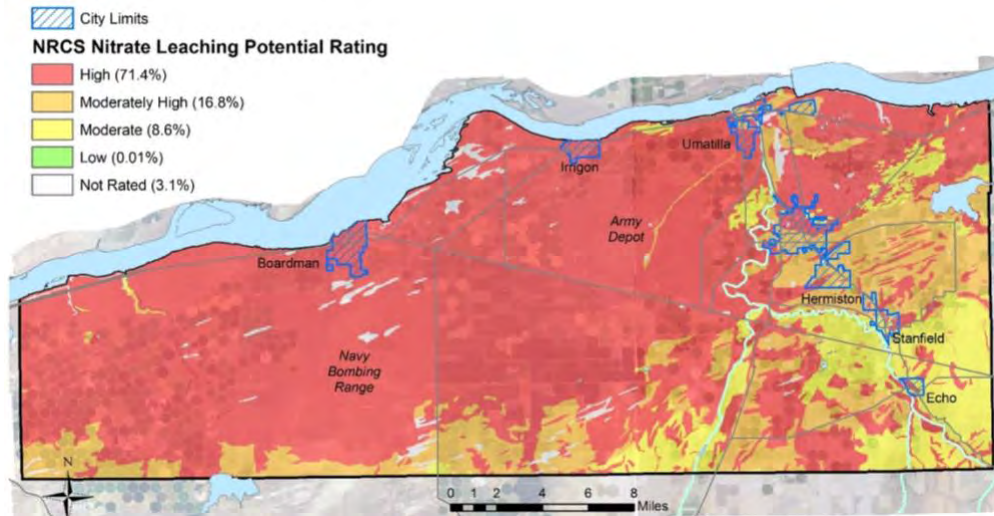
<sup>42</sup> Gerald H. Grondin et al., Hydrogeology, Groundwater Chemistry and Land Uses in the Lower Umatilla Basin Groundwater Management Area 1-9 (hereinafter “1995 Hydrogeology Report, App. D”) (included here as Appendix D).

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* at ES-2-3.

<sup>45</sup> Second Action Plan, App. A at 11.

**Fig. 2, Nitrate Leaching Potential in LUBGWMA<sup>46</sup>**



As noted by Oregon DEQ, these stark figures “highlight[] the vulnerability of the shallow aquifer to contamination.”<sup>47</sup> Once present in groundwater, nitrate can remain and accumulate in the aquifers for decades before eventually discharging into the Columbia River.<sup>48</sup>

Pairing this vulnerability with nitrogen-intensive land use practices is an obvious recipe for disaster, and Oregon officials have consistently failed to take the situation seriously enough to remedy the ongoing and increasing threat to area residents.

### **B. The LUBGWMA Has a Well-Documented History of Nitrate Contamination in Its Groundwater**

The LUBGWMA has an extensive and well-documented history of nitrate contamination in its groundwater aquifers, which are the sole source of drinking water for much of the area’s population of approximately 46,000 individuals.<sup>49</sup> Spanning 550 square miles of northern Umatilla and Morrow Counties, the region has been plagued with high nitrate concentrations dating back to at least the mid-1980s, when groundwater sampling first revealed the problem.<sup>50</sup> In response, DEQ designated the LUBGWMA in 1990 with the intention that it would address nitrate contamination and mitigate nitrogen pollution so that groundwater concentrations would fall below the 7 mg/L state trigger level.<sup>51</sup> Unfortunately, the designation has not resulted in improved water quality as intended; to the contrary, dangerous levels of nitrates in drinking water persist, and are in fact increasing, in the LUBGWMA.

<sup>46</sup> *Id.*

<sup>47</sup> *Id.*

<sup>48</sup> 1995 Hydrogeology Report, App. D at ES-2.

<sup>49</sup> See 2012 Nitrate Report, App. C at Table 6-1; Second Action Plan, App. A at 8 (providing population estimates).

<sup>50</sup> 1995 Hydrogeology Report, App. D at ES-1 & 6.

<sup>51</sup> Second Action Plan, App. A at 1.

Testing conducted in the 1990s found nearly a third (30%) of groundwater samples from monitoring wells exceeded the state trigger level.<sup>52</sup> Samples from areas dominated by CAFOs and agricultural fields where CAFO waste is land applied were showing nitrate levels that reached and exceeded 70 mg/L<sup>53</sup> – seven times the 10 mg/L MCL for nitrate.<sup>54</sup> A 1996 study showed that 23% of the surveyed population were drinking private well water with nitrate concentrations over the 10 mg/L MCL.<sup>55</sup> Of the households with nitrate levels over the MCL, 72% were not taking measures to effectively remove the nitrates before human consumption.<sup>56</sup>

More recent figures suggest that the problem has only worsened. The LUBGWMA Committee compiled the results of well sampling conducted in the region between 2015 and 2016 from a data set of 255 wells, and concluded that nearly half (48%) exceeded the 10 mg/L drinking water standard and nearly two thirds (60%) exceeded the 7 mg/L state trigger level.<sup>57</sup> In a separate survey examining just private domestic wells, the Committee found that 42% of the region’s domestic wells contained nitrate levels exceeding the safe drinking water standard.<sup>58</sup>

In fact, DEQ found that some of the largest water systems in the LUBGWMA are not just susceptible to contamination, but already face substantial nitrate risks. In 2011, DEQ conducted a survey considering the factors influencing nitrate risks at the area’s PWSs, and examined the extent to which these systems were compromised. The report focused solely on Community and Non-Transient, Non-Community systems,<sup>59</sup> and found that at least ten LUBGWMA systems had substantial nitrate problems or risks.<sup>60</sup> The at-risk systems included Boardman, Hermiston, and Irrigon, three of the five municipal water systems within the region. In total, the known substantial risk systems serve approximately 25,023 LUBGWMA residents (58% of all residents served by public water systems in the LUBGWMA).<sup>61</sup>

<sup>52</sup> 1995 Hydrogeology Report, App. D at ES-1 & 5. At the time of these initial tests, the Oregon trigger level was set equal to EPA’s MCL of 10 mg/L, but has since been adjusted to the more protective standard of 7 mg/L. *Id.* at ES-2.

<sup>53</sup> *Id.* at ES 6-7.

<sup>54</sup> 40 C.F.R. § 141.11(d).

<sup>55</sup> Thomas J. Mitchell & Anna K. Harding, *Who Is Drinking Nitrate in Their Well Water? A Study Conducted in Rural Northeastern Oregon*, J. ENVTL. HEALTH 14, 14 (Oct. 1996) (included here as Appendix E).

<sup>56</sup> *Id.* at 18.

<sup>57</sup> Section Action Plan, App. A at 33-34. The sampling data included 17 alluvial aquifer public supply wells, 56 private domestic water supply wells, 10 irrigation wells, 171 monitoring wells, and 1 stock well. *Id.* at 34.

<sup>58</sup> *Id.* at 73.

<sup>59</sup> “Community Water Systems” are ones “that supply water to the same population year-round,” and “non-transient non-community water systems” are ones “that regularly suppl[y] water to at least 25 of the same people at least six months per year[, such as] schools, factories, office buildings, and hospitals.” EPA, *Information about Public Water Systems*, <https://www.epa.gov/dwreginfo/information-about-public-water-systems> (last visited Nov. 13, 2019).

<sup>60</sup> DEQ, *Factors Influencing Nitrate Risks at Oregon Public Water Systems 6-7* (updated Jan. 1, 2012) (hereinafter “Factors Influencing Nitrate Risk Report, App. F”) (included here as Appendix F). DEQ defined “substantial” as either having a nitrate-N measurement at or above 10 mg/L or by having the 90<sup>th</sup> percentile of the nitrate-N measurements greater than 5 mg/L. *Id.* at 6.

<sup>61</sup> *Id.* at 6-7.

**Table 1, C & NTNC Public Water Systems at “Substantial Nitrate Risk”<sup>62</sup>**

<b>PWS Name</b>	<b>Population</b>	<b>System Type</b>	<b>Location</b>	<b>County</b>
Boardman, City of	3500	C	Boardman, OR 97818	Morrow
Country Garden Estates MHP	175	C	Irrigon, OR 97844	Morrow
Hat Rock Mobile Court	60	C	Hermiston, OR 97838	Umatilla
Hat Rock Water Company	96	C	Hermiston, OR 97838	Umatilla
Hermiston, City of	17107	C	Hermiston, OR 97838	Umatilla
Irrigon, City of	1885	C	Irrigon, OR 97844	Morrow
North Hill Water Corporation	100	C	Hermiston, OR 97838	Umatilla
Port of Morrow	1350	NTNC	Boardman, OR 97818	Morrow
River Point Farms LLC	250	NTNC	Hermiston, OR 97838	Umatilla
Conagra Lamb Weston	500	NTNC	Hermiston, OR 97838	Umatilla

Indeed, actual PWS contamination has already occurred and been documented. Since declaration of the LUBGWMA, many of the area’s PWSs have exceeded the 10 mg/L MCL or the 7 mg/L trigger level at least once—and in most cases, have done so repeatedly.

**Table 2, LUBGWMA PWS Exceedances from 2002 to 2019<sup>63</sup>**

<b>PWS Name</b>	<b>Population Served</b>	<b>System Type</b>	<b>Highest Recorded Nitrate Level</b>	<b>Contamination Frequency</b>	<b>County</b>
Alive and Well	50	NC	10.2 mg/L	1 sample > MCL	Umatilla

<sup>62</sup> *Id.* (list derived from those systems listed at page 7, after removing systems located outside the LUBGWMA). Updated population numbers gathered at: Oregon Health Authority, *Inventory List for Oregon Drinking Water Systems*, <https://yourwater.oregon.gov/inventorylist.php> (last accessed Oct. 20, 2019) (providing updated population numbers for the following PWS, searching by PWS name: Boardman, Hermiston, North Hill Water Corp, Irrigon, County Garden Estates MHP, Hat Rock Water Co., Port of Morrow, Hat Rock Mobile Court, Lamb Weston, and River Point Farms).

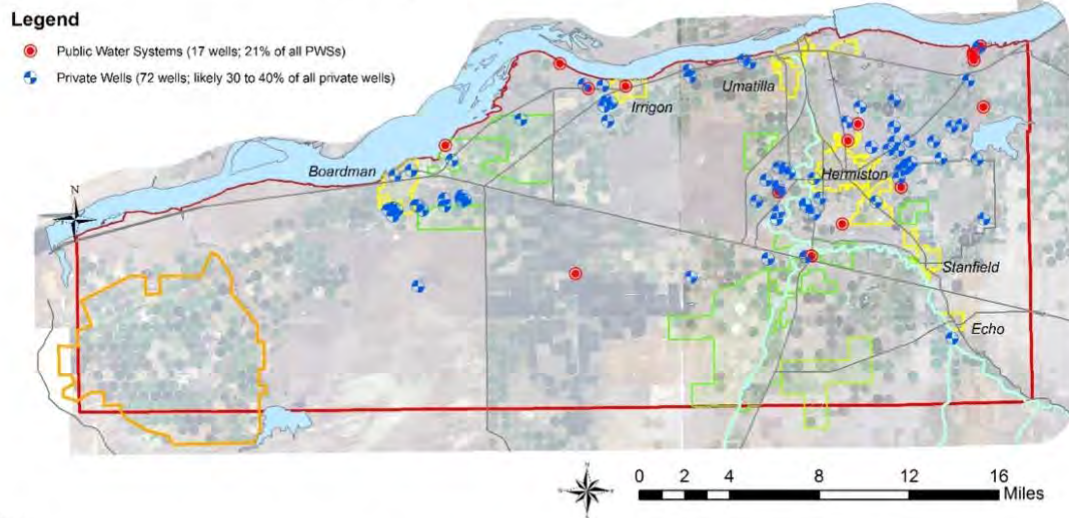
<sup>63</sup> Derived from *Oregon Public Health Drinking Water Data Online*, Oregon Health Authority, <https://yourwater.oregon.gov/index.html> (last accessed Nov. 5, 2019) (included here as Appendix G). Individual entry details can be found by following the “WS Name Look Up” link, then submitting the PWS’s name as shown above. Then follow “Alerts” link under “For further information on this public water system, click on the area of interest below” and review those alerts for nitrate contamination. Even more exceedances are recorded in Oregon’s archived records from before 2002, which are also available at the above website.

Bellinger Produce	100	NC	60.8 mg/L	32 samples > MCL, 44 samples > TL	Umatilla
Boardman, City of	3,500	C	7.5 mg/L	1 sample > TL	Morrow
Comfort Inn & Suites- Hermiston	100	NC	37 mg/L	16 samples > MCL, 63 samples > TL	Umatilla
Lamb Weston	500	NTNC	12 mg/L	2 samples > MCL, 5 samples > TL	Umatilla
Country Garden Estates MHP	175	C	9.8 mg/L	4 samples > TL	Morrow
Hat Rock Mobile Court	60	C	10 mg/L	2 samples = MCL, 5 samples > TL	Umatilla
Hat Rock Water Company	96	C	14 mg/L	11 samples > MCL, 26 samples > TL	Umatilla
Herrerias Park	20	NP	8.9 mg/L	6 samples > TL	Morrow
Irrigon, City of	1,885	C	18 mg/L	26 samples > MCL, 42 samples > TL	Morrow
JR Simplot/Calpine	22	NP	9.9 mg/L	9 samples > TL	Umatilla
North Hill Water Corporation	100	C	9 mg/L	1 sample > TL	Umatilla
ODF/WL Irrigon Fish Hatchery	18	NP	40.9 mg/L	21 samples > MCL, 48 samples > TL	Morrow
OPRD Hat Rock State Park	500	NC	19.4 mg/L	9 samples > MCL, 15 samples > TL	Umatilla
Port of Morrow	1,350	NTNC	10.4 mg/L	2 samples > MCL, 47 samples > TL	Morrow
River Point Farms LLC	250	NTNC	28.5 mg/L	16 samples > MCL, 23 samples > TL	Umatilla
Short Stop #1	200	NC	9.2 mg/L	5 samples > TL	Umatilla
Space Age Fuel	950	NC	28.5 mg/L	11 samples > MCL, 17 samples > TL	Umatilla
Sunridge Water Inc.	200	C	14 mg/L	1 sample > MCL, 31 samples > TL	Umatilla
Upper Columbia Mill	70	NTNC	14 mg/L	14 samples > MCL, 18 samples > TL	Umatilla

Furthermore, Oregon officials have documented nitrate contamination in both public and private drinking wells used by residents of the LUBGWMA.

**Fig. 3, Drinking Water Sources with Documented Nitrate Exceedances<sup>64</sup>**

**Public and Private Drinking Water Wells that Have Exceeded the Nitrate Drinking Water Standard  
Lower Umatilla Basin Groundwater Management Area**



**Notes:**  
Public wells include both active and inactive Public Water Systems monitored by Oregon Health Authority. Of the 181 PWSs in Umatilla and Morrow County, 18 (10%) have exceeded the nitrate drinking water standard at least once. 17 of these wells (94%) are within the LUBGWMA. Of the 81 PWSs in the LUBGWMA, 17 (21%) have exceeded the standard at least once. These percentages do not take into account which aquifer these wells tap. Because some PWS wells are likely completed in the basalt aquifer, the percentage of PWS wells with high nitrate that utilize only the alluvial aquifer is likely higher than 21%.  
Private wells on this map include 50 wells from the Real Estate Transaction database, 14 wells from the regular LUBGWMA Network wells, 7 domestic wells that were included in the 2009 Synoptic Sampling Event, and the Navy Bombing Range well. Approximately 10% of the RET results show nitrate values over the standard. Because the RET database is known to contain results from treated samples and basalt wells, it is likely not a good indicator of the magnitude or extent of nitrate contamination. Approximately 42% of the domestic wells in the LUBGWMA network show nitrate values over the standard. Approximately 30% of the domestic wells sampled during the 2009 Synoptic Sampling Event showed nitrate values over the standard.

Given that the region is and will remain particularly susceptible to groundwater contamination, this nitrate contamination in the LUBGWMA’s drinking water will persist and is likely to get worse without significant changes to current, nitrogen-intensive land use practices.

**C. CAFOs and Irrigated Agriculture Are the Dominant Land Use Activities and Are the Predominant Cause of Nitrate Contamination in the LUBGWMA**

Two related land use activities make up the vast majority of nitrate pollution in the LUBGWMA’s groundwater: CAFOs and irrigated agriculture.<sup>65</sup> The primary source of nitrogen in the LUBGWMA is the region’s CAFOs.<sup>66</sup> There are currently ten permitted CAFO facilities—including one of the nation’s largest dairy CAFOs—operating within the borders of the LUBGWMA.<sup>67</sup> Together, these permitted CAFOs have been housing over 148,000 animals, with state issued permits allowing expansion up to 179,000 animals.<sup>68</sup> For comparison, cows

<sup>64</sup> Second Action Plan, App. A at 73.

<sup>65</sup> Second Action Plan, App. A at 16.

<sup>66</sup> Estimation of N Sources at ii, 11.

<sup>67</sup> Second Action Plan, App. A at 62.

<sup>68</sup> Derived from information obtained by Food & Water Watch from ODA, collected by ODA in 2018 and 2019. Data included here as Appendix H.

outnumber residents by a ratio of 3:1, and cows living in the area as of June 2019 were producing over 4.3 billion pounds of manure annually—516 times more than the human population of the area.<sup>69</sup>

Over half of the land in the LUBGWMA is used to cultivate crops on irrigated fields.<sup>70</sup> CAFOs are also responsible for much of the nitrate leached from irrigated agricultural lands because much of this irrigated crop production is controlled by the area’s CAFOs (approximately 42,000 acres of crop and pasture lands),<sup>71</sup> which are used to land apply animal waste generated at the CAFOs. Additionally, CAFOs sell or give away animal waste as fertilizer to other farmers as part of standard manure management practices.<sup>72</sup> Oregon estimates that 90% of the animal waste from CAFOs in the LUBGWMA is land applied to irrigated agriculture.<sup>73</sup> In total, irrigated agriculture applies nearly 23 million pounds of nitrogen to fields each year.<sup>74</sup> According to Oregon officials, nitrogen loading from CAFOs and irrigated agriculture combined accounts for an estimated 82% of the nitrogen imported into the LUBGWMA, and 81.6% of the nitrate that leaches into the LUBGWMA’s vulnerable aquifers.<sup>75</sup>

**Table 3, CAFOs Operating in LUBGWMA<sup>76</sup>**

<b>Facility</b>	<b>Designation</b>	<b>Date Permitted</b>	<b>Permitted Animals</b>	<b>Actual Animals</b>
Beef Northwest Feeders	Large Concentrated	6/29/2009	38,500	42,046
Threemile Heifer Facility	Large Concentrated	7/14/2000	32,000	8,944
Threemile Canyon Farms’ Sixmile Dairy	Large Concentrated	6/7/2000	36,100	35,295
Threemile Canyon Farms’ Columbia River Dairy	Large Concentrated	6/1/2000	28,000	26,340

<sup>69</sup> Food & Water Watch calculations based on the following: EPA, EPA/600/R-04/042, Risk Assessment Evaluation for Concentrated Animal Feeding Operations 9 (May 2004); USDA National Resources Conservation Service, Agricultural Waste Management Field Handbook, Chapter 4 at 4-12 to 4-20 (March 2008), <https://www.wcc.nrcs.usda.gov/ftpref/wntsc/AVM/handbook/ch4.pdf> (last visited Nov. 4, 2019); Appendix H. Local values used: 75,060 beef cattle (producing 1,382,680,260 lbs of waste) and 73,814 dairy cows (producing 2,992,493,374 lbs of waste), compared with 46,320 humans (producing 8,476,560 lbs of waste).

<sup>70</sup> Second Action Plan, App. A at 12.

<sup>71</sup> Second Action Plan, App. A at 62.

<sup>72</sup> See, e.g., DEQ Water Quality Division, Estimation of Nitrogen Sources, Nitrogen Applied, and Nitrogen Leached to Groundwater in the Lower Umatilla Basin Groundwater Management Area 6 (Jun. 13, 2011) (hereinafter “Estimation of N Sources, App. I”) (included here as Appendix I); DEQ & ODA, Oregon Confined Animal Feeding Operation National Pollutant Discharge Elimination System General Permit Number 01-2016, at 12, 19 (allowing for transfers of animal waste, litter, and process wastewater to non-CAFO operators under NPDES general permit for CAFOs),

<https://www.oregon.gov/ODA/shared/Documents/Publications/NaturalResources/NPDESGeneralPermit.pdf> (last visited Nov. 13, 2019).

<sup>73</sup> Estimation of N Sources, App. I at 6, 11.

<sup>74</sup> See *id.* at 11, 15-16; Second Action Plan, App. A at 42, 62.

<sup>75</sup> Estimation of N Sources, App. I at 11, 15.

<sup>76</sup> See Appendix H for data received from Oregon Department of Agriculture.



Double M Ranch	Large Concentrated	10/17/2018	6,000	5,960
Columbia Feeders	Large Concentrated	10/30/2018	4,000	2,109
Beef City	Small Concentrated	10/5/2018	299	85
GT Land & Cattle	Large Concentrated	10/5/2018	10,000	10,615
Top Cut Cattle	Medium Concentrated	11/9/2018	908	410
H3 Feeders	Large Concentrated	10/30/2018	8,000	6,065
Meenderinck Dairy	Large Concentrated	9/4/2001	3,000	203
Sage Hollow Ranch	Large Concentrated	11/19/2009	8,700	7,770
Cold Springs Dairy	Large Concentrated	10/11/2018	3,600	3,032
<b>Total:</b>			<b>179,107</b>	<b>148,874</b>

In addition to these CAFOs, Oregon is moving towards permitting yet another massive dairy CAFO in the LUBGWMA that has the potential to bring up to 28,300 more cows to the area, along with over 173 million gallons of waste needing disposal annually (40,882,123.64 gallons of liquid manure; 44,224,120.52 gallons of solid manure/litter; and 88,172,845.714 gallons of wastewater).<sup>77</sup> The prevalence and proposed expansion of CAFOs and other livestock production in the LUBGWMA virtually ensures that contamination is likely to continue and worsen without a change in approach.

The reason CAFOs have such potential to introduce massive quantities of nitrogen into the environment and the LUBGWMA’s drinking water is simple: managing and disposing of the overwhelming quantities of nitrogen-laden animal waste is an unavoidable part of their everyday operating procedures. Under these facilities’ Animal Waste Management Plans (“AWMPs”), a requirement for coverage under Oregon’s general Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit for CAFOs in the state,<sup>78</sup> CAFOs typically manage the enormous amounts of animal waste they produce by storing it in “lagoons” or other storage facilities and then land applying it to nearby agricultural lands.<sup>79</sup> While Oregon’s permitting of CAFOs ostensibly provides for conditions that restrain land applications to within appropriate agronomic rates,<sup>80</sup> data confirming widespread nitrate contamination tell a very different story. Oregon DEQ admits that the greatest increases in nitrate contamination it has found are on lands subjected to CAFO manure land applications. And the most recent data available show test wells on lands utilized by the state’s largest dairy, Threemile Canyon Farms, contain nitrate levels over 60 mg/L.<sup>81</sup> Oregon’s AWMPs do not require CAFOs to monitor surface water or groundwater, even though monitoring is an exceedingly valuable tool in a situation like the one facing the LUBGWMA, unless the facility “discharges to waters twice in a 24-month period.”<sup>82</sup> Given that land application runoff is generally considered stormwater rather than a discharge, which ignores

<sup>77</sup> See Easterday Application to Register to the Oregon CAFO General Permit, at 3 (July 1, 2019) (hereinafter Easterday CAFO Application, App. J) (included here as Appendix J). Cubic feet converted to gallons using 1:7.48052 conversion ratio.

<sup>78</sup> DEQ, Oregon’s Nutrient Management Program (June 2014) 13-14 (included here as Appendix K).

<sup>79</sup> See, e.g., *id.*

<sup>80</sup> EPA’s description of “agronomic rates” can be found here: EPA, Managing Manure Nutrients at Concentrated Animal Feeding Operations at App. I (Dec. 2004), [https://www.epa.gov/sites/production/files/2015-08/documents/cafo\\_manure\\_guidance.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/cafo_manure_guidance.pdf) (last visited Nov. 5, 2019).

<sup>81</sup> Second Action Plan, App. A at 33-34.

<sup>82</sup> DEQ, Oregon’s Nutrient Management Program at 14, App. K.

leaching into groundwater rather than runoff to surface water, CAFOs will rarely trigger this requirement.

CAFOs in the LUBGWMA have a history of causing concern about drinking water quality in the area. For example, the region previously was home to the Lost Valley Farm megadairy, which ODA cited for hundreds of violations of its Clean Water Act NPDES permit within 18 months of opening.<sup>83</sup> Oregon officials approved the facility despite DEQ and ODA acknowledging that the CAFO was “a new potential source of nitrate in the [LUB]GWMA.”<sup>84</sup> Among these violations were consistent, unauthorized discharges over the top of lagoon liners, repeated overflow of wastewater onto permeable surfaces, storage of wastewater in improperly lined and unlined lagoons, failure to install leak detection systems, and land application of waste exceeding agronomic rates.<sup>85</sup> The Lost Valley Farm dairy was permitted to house up to 30,000 cows, despite being sited on top of the LUB’s especially vulnerable groundwater aquifer and the area’s preexisting nitrate contamination problems.<sup>86</sup> In a display of apparent disregard for the implications of another Lost Valley Farm debacle, Oregon legislators rejected several pieces of proposed legislation designed to protect public health and avert a repeat of this kind of situation in the future.<sup>87</sup>

This problem is not limited to Lost Valley Farms. DEQ employees’ analysis indicates that current practices at Threemile Canyon Farms, unrelated to any AWMP or permit violations, are likely contributing to the area’s nitrate pollution.<sup>88</sup> Yet the Second Action Plan does not require or even suggest any changes to Threemile Canyon’s or other CAFOs’ waste management practices.

Furthermore, DEQ only tracks the leaching potential of land-applied CAFO waste, and does not account for leaching directly from CAFO manure lagoons or other waste storage facilities. The lagoons that are used to store manure prior to land application can leach nitrogen-heavy waste into the underlying soil and subsequently the aquifers below. In fact, even when “properly” constructed according to standards set by the USDA’s Natural Resources

<sup>83</sup> See, e.g., Tracy Loew, *Troubled Oregon Megadairy Lost Valley Farm to Be Shut Down and Sold*, STATESMAN JOURNAL (Oct. 24, 2018) (included here as Appendix L).

<sup>84</sup> *In the Matter of Greg de Velde, dba, Lost Valley Farm*, Notice of Revocation of Individual Permit No. OR995129 and Notice of Right to a Contested Case Hearing at 5 (Jun. 27, 2018) (hereinafter “Lost Valley Notice of Revocation, App. M”) (included here as Appendix M).

<sup>85</sup> *Id.* at 12-13, 17, 26-30.

<sup>86</sup> See *id.* at 31 (noting that the CAFO is located over “porous soils ... in an area where the aquifer is on average approximately 33 feet below land surface” and “ODA generally treats aquifers of depths less than 100 feet as being vulnerable to surface contaminants”); DEQ & ODA, Lost Valley Farm CAFO Permit FAQs (included here at Appendix N) (noting the 30,000 permitted limit and attempting to justify approval of the facility to a concerned public, before eventually having to close the facility due to repeated and consistent violations).

<sup>87</sup> Lynne Terry, *Is Oregon Paving the Way for More Mega-Dairies?*, CIVIL EATS (June 13, 2019) (included here as Appendix O) (discussing the failure of Senate Bill 876); Tracy Loew, *Megadairy Regulation Proposals Die in Oregon Legislature as Key Deadline Passes*, STATESMAN JOURNAL (Apr. 11, 2019) (included here as Appendix P) (discussing three failed legislative attempts to protect public health from future CAFO failures).

<sup>88</sup> Email from Phil Richerson, DEQ Nonpoint Source Hydrogeologist, to Don Butcher, DEQ (Feb. 14, 2017) (included here as Appendix Q) (obtained through an Oregon Public Records Law request).

Conservation Service and in compliance with Oregon requirements for storage of CAFO wastes, lagoons are actually *designed* to leak.<sup>89</sup>

Even this is not the full story. DEQ acknowledges that nitrate pollution from CAFOs is higher than estimated because the state has not looked at or accounted for several additional ways that CAFOs contaminate the environment with nitrogen pollution.<sup>90</sup> These unaccounted for sources include the re-deposition of the approximately 50% of nitrogen excreted by CAFO animals that is lost to the atmosphere during waste handling and storage, and spills and leaks of animal waste (of which there are several documented cases).<sup>91</sup> If DEQ had factored these other sources of nitrate pollution into its estimates, the agency acknowledges the nitrate contamination attributable to CAFOs would be even larger.<sup>92</sup>

Thus, even while not fully accounted for, the unavoidable conclusion is that CAFOs and irrigated agriculture's use of CAFO waste are primarily responsible for nitrate pollution of drinking water in the LUBGWMA. The consequences of this failure to control CAFOs' contributions to elevated nitrate levels are shown by on-the-ground data and trends. For example, DEQ's 2012 Nitrate Report looked specifically at well samples from the Threemile Canyon Farms CAFO. Of the 15 wells examined, 13 had nitrate concentrations over the 10 mg/L MCL.<sup>93</sup> And unfortunately, the data trends show that nitrate pollution on lands receiving CAFO waste is only getting worse. The most recent sampling data from 2015 and 2016 found multiple wells located within CAFO land application areas with nitrate concentrations over 60 mg/L, and "[t]he single largest increase [of nitrate pollution] was at a CAFO monitoring well."<sup>94</sup>

Yet, despite this stark and unavoidable reality, Oregon officials are moving towards approval of yet another massive CAFO in the LUBGWMA to replace the failed Lost Valley Farm.<sup>95</sup> The proposed new owner/operator of the site, Easterday Farms, intends to reopen the

<sup>89</sup> See, e.g., *Cnty. Ass'n for Restoration of the Env't. v. Cow Palace, LLC*, 80 F. Supp. 3d 1180, 1223 (E.D. Wash. 2015) ("even assuming the lagoons were constructed pursuant to NRCS standards, these standards specifically allow for permeability and, thus, the lagoons are *designed to leak*" (emphasis added)); EPA, EPA/600/R-04/042, Risk Assessment Evaluation for Concentrated Animal Feeding Operations 24 (May 2004) (noting that nitrate contamination can be caused by manure lagoons that are known to leak into groundwater for a variety of reasons); Food & Water Watch et al., Public Comments on Proposed NPDES Permit for Lost Valley Ranch Dairy CAFO at 11 (Aug. 4, 2016) (included here as Appendix R) (noting that even the engineers hired by Lost Valley Ranch estimated the potential for 1,480 gallons of leakage per day when using the most protective type of lagoon liners); NRCS, Agricultural Waste Management Field Handbook, Chapter 10 at 10D-4 (Aug. 2009), <https://www.wcc.nrcs.usda.gov/ftpref/wntsc/AWM/handbook/ch10.pdf> (last visited Nov. 5, 2019) (recognizing that even the more protective synthetic liners can only "reduce seepage," not eliminate it).

<sup>90</sup> Estimation of N Sources, App. I at 7.

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> 2012 Nitrate Report, App. C at v.

<sup>94</sup> Second Action Plan, App. A at 33-34.

<sup>95</sup> DEQ, Director's Report Memorandum (Sept. 26-27, 2019) at 4-5,

[https://www.oregon.gov/deq/EQCdocs/09272019\\_ItemI\\_DirectorsReport.pdf](https://www.oregon.gov/deq/EQCdocs/09272019_ItemI_DirectorsReport.pdf) (last visited Oct. 23, 2019) (discussing the reopening of the site under new ownership, and stating that "DEQ will continue to keep the commission updated on developments as this project moves forward."); ODA, Easterday Farms Dairy, LLC: Talking Points (July 16, 2019) (included here as Appendix S) (obtained through an Oregon Public Records Law request) (discussing where the CAFO "will be located," implying that a permit will issue once ODA approves clean-up efforts at the site to address the previous Lost Valley mismanagement, and outlining "talking points" for agency personnel to use to

facility as another CAFO with up to 28,300 animals under a new NPDES permit.<sup>96</sup> If allowed to proceed as planned, the Easterday Farms CAFO will have the potential to introduce hundreds of millions of pounds of additional nitrogen-laden waste to the area<sup>97</sup>—enough waste to fill over 262 Olympic sized swimming pools each year.<sup>98</sup> Operating a CAFO on this site “presents serious concerns for water quality and safe drinking water” because any new CAFO is a source of nitrates further endangering the area’s groundwater.<sup>99</sup> Being upgradient of a large part of the LUBGWMA, with five PWS and many private wells near the site, “any groundwater pollutant emanating from the dairy could potentially impact” these crucial sources of drinking water.<sup>100</sup> The Easterdays intend to land apply the animal waste to be generated at the CAFO to surrounding agricultural fields.<sup>101</sup>

As long as CAFOs and other agricultural operations are allowed to continue polluting the LUBGWMA with excessive nitrogen, the imminent and substantial endangerment to human health will continue and will only worsen, leaving local populations at ever increasing risk to their health in direct contravention of the SDWA.

#### **D. Conditions in the LUBGWMA Constitute an Imminent and Substantial Endangerment to Human Health Under the SDWA**

The present and increasing nitrate contamination in the LUBGWMA presents an imminent and substantial endangerment to human health because nitrate contamination creates a known and significant health risk and there is a reasonable cause for concern that individuals are and will be exposed to this risk at ever increasing concentrations.

##### *1. Nitrate Contamination in the LUBGWMA Drinking Water Constitutes an Endangerment*

Nitrate is plainly an endangerment to public health under the SDWA because EPA not only categorizes it as a “contaminant,”<sup>102</sup> but as an “acute contaminant” known to pose significant health risks.<sup>103</sup> EPA previously found that nitrate levels above the MCL of 10 mg/L present an imminent and substantial endangerment to human health.<sup>104</sup> Drinking water

defend their authorizing the new Easterday CAFO); George Plaven, *Easterday Family Plans to Re-Open State’s Second-Largest Dairy*, CAPITOL PRESS (July 9, 2019) (included here as Appendix T) (describing the new owner’s intent to open another dairy on the Lost Valley site).

<sup>96</sup> See Easterday CAFO Application, App. J.

<sup>97</sup> See Easterday CAFO Application, at 3, App. J; *supra* note 77 and accompanying text.

<sup>98</sup> Using 660,253.09 gallon swimming pool volume. See Jeremy Hoefs, *Measurements for an Olympic Size Swimming Pool*, <https://www.livestrong.com/article/350103-measurements-for-an-olympic-size-swimming-pool/> (last accessed Nov. 4, 2019).

<sup>99</sup> See Lost Valley Notice of Revocation at 4, App. M.

<sup>100</sup> See *id.* at 31.

<sup>101</sup> See Plaven, App. T; Easterday CAFO Application, App. J at 3.

<sup>102</sup> 42 U.S.C. § 141.62(b).

<sup>103</sup> See DEQ, *Fact Sheet: Nitrate in Drinking Water* (Aug 15, 2017) (hereinafter “DEQ, *Fact Sheet*, App. U”) (included here as Appendix U); Mary H. Ward et al., *Drinking Water Nitrate and Human Health: An Updated Review*, 15(7) INT’L J. ENVTL. RESEARCH PUB. HEALTH 1557 (July 2018) (included here as Appendix V); Oregon Health Authority, *Nitrate in Drinking Water – Frequently Asked Questions* (included here at Appendix W).

<sup>104</sup> In the Matter of: Yakima Valley Dairies, SDWA-10-2013-0080, at 7 (EPA Mar. 19, 2013).

contaminated with nitrate has well-documented adverse health risks including a variety of cancers, thyroid disease, “blue-baby syndrome,” and reproductive and gestational problems.<sup>105</sup> EPA’s categorization of nitrate as an “acute contaminant” indicates that “one exposure can affect a person’s health,” and that “[t]oo much nitrate in your body makes it harder for red blood cells to carry oxygen.”<sup>106</sup>

Moreover, nitrate-contaminated drinking water is especially dangerous for sensitive populations such as infants and pregnant women. High levels of nitrate in drinking water are “a serious health concern for infants and pregnant or nursing women,” and are known to cause methemoglobinemia, or “blue-baby syndrome,” a potentially fatal condition in which an infant’s skin turns blue from lack of oxygen in the blood.<sup>107</sup> Nitrate in water supplies has also been linked to spontaneous miscarriages and birth defects.<sup>108</sup>

According to the census estimates for the LUBGWMA region, significant populations that are especially sensitive to nitrate—infants and pregnant and nursing women—reside in the LUBGWMA. Census data show that 12.3% of women between the age of 15 and 50 living in Morrow County gave birth to a child from 2016 to 2017.<sup>109</sup> Six and a half percent of the same demographic living in Umatilla County gave birth to a child between 2017 and 2018.<sup>110</sup>

Nitrate contamination is already present and will continue to be present at increasingly elevated levels in USDWs for the LUBGWMA without EPA action. The fact that a contaminant known to cause disease and illness is present at unsafe levels in the LUBGWMA’s private wells and PWS, which are used by tens of thousands of residents, demonstrates an unambiguous SDWA “endangerment.”

## 2. *The Public Health Endangerment Is Imminent*

Since the present contamination of the region’s drinking water is thoroughly documented, endangerment is clearly imminent. As explained above, an endangerment is “imminent” if conditions that give rise to it are present, even if actual harm has not already been documented in the contaminated area.<sup>111</sup>

Unsafe levels of nitrate contamination in the LUBGWMA’s water supply were first identified over 30 years ago, and data trends indicate that nitrate contamination overall is increasing in the LUBGWMA, despite Oregon’s 20 plus years of implementing mitigation

<sup>105</sup> See DEQ, *Fact Sheet*, App. U; JoAnn Burkholder et al., *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*, 115 ENVTL. HEALTH PERSPECTIVE 308, 310 (2008) (hereinafter “Burkholder, *Impacts of Waste*, App. X”) (included here as Appendix X)

<sup>106</sup> EPA Region 10, *Lower Yakima Valley Groundwater: Why is Nitrate a Concern?* (included here as Appendix Y).

<sup>107</sup> DEQ, *Fact Sheet*, App. U.

<sup>108</sup> *Id.*; Burkholder, *Impacts of Waste*, App. X at 310.

<sup>109</sup> Census Reporter, Morrow County, OR, <https://censusreporter.org/profiles/05000US41049-morrow-county-or/> (last visited Nov. 5, 2019).

<sup>110</sup> Census Reporter, Umatilla County, OR, <https://censusreporter.org/profiles/05000US41059-umatilla-county-or/> (last visited Nov. 5, 2019).

<sup>111</sup> SDWA Emergency Authority Guidance, App. B at 8 (citing *U.S. v. Conservation Chemical Co.*, 619 F. Supp. 162, 193-194 (W.D. Mo 1985)).

measures meant to decrease nitrates under the GWMA designation. The greatest increases in nitrate levels have been found at wells located where CAFOs land apply their animal waste.<sup>112</sup> This further demonstrates that endangerment is imminent and that CAFO operations and the waste they introduce to the area are the primary culprit. This upward trend increases both the likelihood that individuals will be exposed to nitrate at harmful levels and the severity of those exposures. Oregon’s Nitrate Report demonstrated that 55% of the wells tested showed increasing concentrations of nitrate.<sup>113</sup>

Finally, the endangerment caused by nitrate contamination in the LUBGWMA is imminent because the likely primary causes of the contamination—CAFOs and their high-risk waste management practices—are present and increasingly dominant in the area, with 10 permitted CAFOs already in operation and the Easterday Farms mega-dairy threatening to open in the near future. Of these 10 existing facilities, four are dairies and six are cattle feedlots. These CAFOs manage approximately 42,000 acres of crop and pasture land in the LUBGWMA where they dispose of animal wastes, and this is in addition to any non-CAFO owned irrigated agriculture lands that nonetheless utilize CAFO waste as fertilizer.<sup>114</sup>

Existing concentrations of irrigated agriculture and CAFOs in the LUBGWMA make clear that an endangerment to human health is imminent. Data collected over the span of decades confirm this. Oregon officials’ plan to permit another 28,300 cow CAFO in the area atop a particularly vulnerable aquifer pushes the needle off the scale, leaving no question as to imminence.

### *3. The Public Health Endangerment Is Substantial*

The health risks associated with nitrate contamination in the LUBGWMA constitute a substantial endangerment under the SDWA. Several PWSs and many private wells within the LUBGWMA have already been found to exceed drinking water standards for nitrate contamination, and thus residents of the LUBGWMA have been and are currently being “exposed to a risk of harm.”<sup>115</sup> This alone demonstrates that the endangerment is substantial.

Moreover, because nitrate levels are on the rise in the LUBGWMA and the state’s ineffective, voluntary-only plan remains practically unchanged, there is currently no realistic potential for *fewer* PWSs and private wells to be contaminated or contaminated at lower levels than they currently are, absent emergency action by EPA. Petitioners have reasonably concluded (and Oregon officials have themselves implied) that more people’s drinking water will become contaminated over time, and that the level of contamination will continue to increase. These exposures constitute a serious risk of harm, indicating that the substantial endangerment that already exists will only become more substantial and in need of emergency EPA action.

<sup>112</sup> Second Action Plan, App. A at 33.

<sup>113</sup> See 2012 Nitrate Report, App. C at 5.

<sup>114</sup> Second Action Plan, App. A at 62.

<sup>115</sup> See SDWA Emergency Authority Guidance, App. B at 11 (explaining that an endangerment is substantial “if there is a reasonable cause of concern that someone may be exposed to a risk of harm”).

## V. OREGON OFFICIALS HAVE FAILED TO ACHIEVE SAFE DRINKING WATER QUALITY DESPITE DECADES OF ATTEMPTING TO IMPLEMENT MITIGATION PLANS

EPA should exercise its emergency authority under Section 1431 of the SDWA because users of USDWs and PWSs in the LUBGWMA face imminent and substantial endangerment, and whatever action Oregon officials have taken or are taking is obviously not timely or effective.<sup>116</sup>

Nearly thirty years after designation of the LUBGWMA, the endangerment to public health has worsened. As of 2016, the area's USDWs were exhibiting increasing contamination trends, with nearly half (48%) of tested wells exceeding the federal standard and 60% of wells surpassing the state action level standard of 7 mg/L.<sup>117</sup> Moreover, the threat extends to communities well beyond those living in purely agricultural areas: Oregon considers at least ten community and non-transient, non-community PWSs in the LUBGWMA, which serve approximately 25,000 residents, "substantial nitrate risks."<sup>118</sup> More than half of the LUBGWMA population is at substantial risk from nitrate-contaminated drinking water, with a number of water systems testing positive for unsafe nitrate levels. Thus, Oregon officials are and have been fully aware of the ongoing threat to human health that exists in the LUBGWMA.

Oregon's agencies and officials have proven ineffective at dealing with this imminent and substantial endangerment. After designation of the LUBGWMA, the primary tools for bringing drinking water quality back within safe levels have been the LUBGWMA Committee's First and Second Action Plans. The Committee finalized the First Action Plan and began implementation in 1997.<sup>119</sup> It finalized the Second Action Plan in 2019.<sup>120</sup>

Several Oregon agencies have failed to execute their responsibility to address the LUBGWMA's dangerous nitrate problems. The Oregon Health Authority ("OHA") has primary responsibility for implementing the SDWA in Oregon.<sup>121</sup> The Oregon Department of Environmental Quality ("DEQ") is responsible for regulating and addressing pollutants that affect waterways under the Clean Water Act. The Oregon Department of Agriculture ("ODA") is responsible for developing those portions of the GWMA's Action Plan that deals with farming practices.<sup>122</sup> These agencies work together to implement drinking water protections in Oregon.<sup>123</sup> The LUBGWMA Committee is the body tasked with implementing and overseeing the Action Plans. While Oregon officials have clear authority to adopt the mandatory regulations necessary to solve this problem, they have consistently refused to take such action, instead relying on voluntary-only plans in the past and again in the Second Action Plan.

<sup>116</sup> See *supra* Section III.

<sup>117</sup> Second Action Plan, App. A at 37.

<sup>118</sup> Factors Influencing Nitrate Risk Report, App. F at 6-7; Table 2, *supra*.

<sup>119</sup> DEQ, Lower Umatilla Basin Groundwater Management Area Action Plan (Dec. 8, 1997) (hereinafter "First Action Plan, App. Z") (included here as Appendix Z).

<sup>120</sup> Second Action Plan, App. A.

<sup>121</sup> See ORS 448.277.

<sup>122</sup> Second Action Plan, App. A at 6.

<sup>123</sup> *Oregon's Water Quality Programs Regulatory Overview* (included here as Appendix AA).

The Action Plans suggest, but do not mandate, practices that could begin to abate the ongoing endangerment to human health.<sup>124</sup> Since declaration of the LUBGWMA, state and local officials have been operating under the assumption that “once businesses, organizations, governments and individuals are aware of the environmental consequences of certain practices, they will seek alternatives to reduce the likelihood of groundwater contamination.”<sup>125</sup> Consequently, the LUBGWMA Committee has taken a purely “voluntary approach” to combatting groundwater contamination rather than implementing mandatory or regulatory measures to reduce nitrates in the area’s groundwater.<sup>126</sup> Additionally, while DEQ and the LUBGWMA Committee memorialized a number of mitigation goals, recommendations, and strategies in the 1997 Action Plan, Oregon allocated no funding to actually execute the Plan.<sup>127</sup> Instead, the state placed the implementation burden on local jurisdictions that were admittedly plagued by “resource constraints” and already “under great pressure to complete many mandatory activities prior to implementing voluntary and non-regulatory tasks.”<sup>128</sup> Oregon again has failed to provide a dedicated funding source for implementation of the Second Action Plan, instead merely noting several disparate potential funding sources that it encourages local and state agencies to seek out.<sup>129</sup>

In addition to the tools available to DEQ and the LUBGWMA Committee, ODA has authority to address the pervasive nitrate pollution in the region, which it refuses to meaningfully implement. Under the Agricultural Water Quality Management Act,<sup>130</sup> ODA develops Agricultural Water Quality Management Area (“WQMA”) Plans and Rules.<sup>131</sup> While Area Plans are “neither regulatory nor enforceable,” ODA’s Area Rules are regulatory and contain enforcement provisions. The Umatilla Agricultural WQMA, which the Second Action Plan points to for ODA authority to help improve water quality in the LUBGWMA,<sup>132</sup> and the Willow Creek WQMA provide the operative set of Area Plans and Rules relevant to the LUBGWMA. The Umatilla Agricultural WQMA covers the eastern portion of LUBGWMA,<sup>133</sup> while the Willow Creek WQMA covers the western portion.<sup>134</sup> Both Area Plans rely on voluntary measures and refer back to the LUBGWMA’s Action Plan in circular, and predictably impotent, ways.<sup>135</sup>

While the LUBGWMA’s Second Action Plan relies on the potential “regulatory backstops [in the form of WQMA Rules] to the voluntary efforts described in the area plans,” that “backstop” is no more than a paper tiger since the Area Rules lack any degree of specificity and have not been implemented in a manner that has reduced or could actually reduce nitrate

<sup>124</sup> LUBGWMA Committee, <https://lubgwma.org/> (last visited Nov. 5, 2019).

<sup>125</sup> First Action Plan, App. Z at 28.

<sup>126</sup> First Action Plan, App. Z at 11.

<sup>127</sup> *Id.* at 30.

<sup>128</sup> Second Action Plan, App. A at 82.

<sup>129</sup> *See* Second Action Plan, App. A.

<sup>130</sup> ORS 568.900-.933

<sup>131</sup> Second Action Plan, App. A at 4.

<sup>132</sup> *Id.*

<sup>133</sup> ODA, Umatilla Agricultural Water Quality Management Area Plan 17 (Dec. 6, 2018) (included here as Appendix AB).

<sup>134</sup> ODA, Willow Creek Water Quality Management Area Plan 17 (Mar. 2019) (included here as Appendix AC).

<sup>135</sup> Umatilla WQMA Plan, App. AB at 23-24, 41; Willow Creek WQMA Plan, App. AC at 37, 41.



levels in the area. In fact, ODA is open about the fact that Area Rules, unlike actual rules, “don’t specify” how each agricultural landowner must avoid further contaminating drinking water.<sup>136</sup> The Area Rules for the Umatilla and Willow Creek Agricultural WQMA lay out cursory and generalized requirements that are supposedly enforceable by ODA, but given that drinking water contamination in the area has increased over time despite the Rules clearly shows their ineffectiveness. The Umatilla Area Rules purport to require that land application of nutrients, “including manure . . . , must be done at a time and in a manner that does not pollute waters of the state.”<sup>137</sup> The Willow Creek Area Rules lack even this vague requirement, instead requiring only that “irrigation must be done in a manner that *limits* the amount of pollutants in the runoff from the irrigated area or that leaches into groundwater.”<sup>138</sup> Thus, the Willow Creek Rules on their face *allow for* continued groundwater contamination. The Area Rules do not provide any requirements regarding how to avoid contaminating drinking water in this particularly vulnerable area, and their overarching mandates have never been enforced, as proven by data showing long-standing and increasing nitrate pollution to USDWs. Given the decades of dangerous nitrate contamination in the LUBGWMA, these two sets of vague and poorly-enforced WQMA Plans and Rules fall far short of what is needed, and far short of what would constitute action to protect public health precluding EPA from taking its own emergency action under the SDWA.

Without the necessary funding or regulatory mandates that are clear and enforceable, the First Action Plan was left largely unimplemented and predictably failed to bring nitrate levels within state and federal standards. The plan articulated eight goals to be met by December 2009, the most important of which was achieving a downward trend in nitrate levels throughout most of the region. Not only was this goal not met, even 10 years after intended, only three of the other goals were actually met. Additionally, of the eighteen recommended tasks, only five were implemented in full.

**Table 4, Attainment of First Action Plan Goals<sup>139</sup>**

<b>Goal</b>	<b>Status</b>
Data indicates a downward trend in nitrate levels throughout most of the GWMA	Not Met
95% of irrigated acreage is implementing an accepted system of BMPs or are covered by an implementation plan and the recommendations are in place and being used	Not Met
80% of residents are still aware of the nitrate problem and are aware of at least one activity which contributes to the problem. 75% can cite at least one activity they have changed because of their awareness of the issue	Not Met
All local area governments can cite procedures, requirements, and/or practices they have instituted as a result of the GWMA declaration	Partially Met

<sup>136</sup> ODA, A Landowner’s Guide to Oregon’s Agricultural Water Quality Management Program 4 (included here as Appendix AD).

<sup>137</sup> OAR 603-095-0340(7)(a); OAR 603-095-2840; *see also* OAR 603-095-0340(2) & 603-095-2480(2) (cross-referencing to ORS 468B.25 (prohibiting any person from “[c]aus[ing] pollution of any waters of the state”) and 468B.050 (requiring facilities to obtain coverage under state water quality permits)).

<sup>138</sup> OAR 603-095-2840(5) (emphasis added).

<sup>139</sup> Second Action Plan, App. A.

Methods to address and reduce the impact of septic systems have been adopted in all areas considered high risk for nitrate loading from high densities of septic systems	Partially Met
Monitoring data show no violation of permit specific concentration limits imposed on Food Processors	Met
90% of CAFOs are implementing an accepted system of BMPs or are covered by an implementation plan	Met
The Umatilla Chemical Depot Washout treatment system is working as expected and reinjection water is not migrating beyond the capture zone of the treatment system	Met

Importantly, even though the goal that “90% of CAFOs are implementing an accepted system of [Best Management Practices] or are covered by an implementation plan” was met, the greatest increases in nitrate levels were found at test wells where CAFOs land apply manure, as discussed above. Thus, it appears that the referenced BMPs for CAFO’s manure management were unsuccessful at actually reducing or stopping the increase in nitrate contamination despite successful “implementation” at 90% or more of the area’s CAFOs. Despite this, “accepted BMPs” have not been strengthened by state agencies.

Now in 2019, after more than 20 years of voluntary-only BMPs and implementation measures failing to reduce nitrate levels or even stop the ongoing increases in nitrate concentrations, Oregon *again* refused to adopt a single mandatory measure to reduce existing or future nitrate pollution in the area’s groundwater. The Second Action Plan does not discuss this glaring fact, much less provide an explanation why Oregon officials believe more of the same will yield different results. At most, the Second Action Plan provides that “[i]f progress in implementing strategies (that lead to reductions [sic] the groundwater nitrate levels) is not accomplished” when the Committee conducts its annual assessments, it “*may* include mandatory actions or regulatory changes to address protection of groundwater.”<sup>140</sup>

Tellingly, this is precisely what the First Action Plan said over 20 years ago in 1997: “If the voluntary approach does not result in satisfactory progress towards reducing nitrate contamination in the groundwater, mandatory requirements will be considered as part of the action plan. The Groundwater Protection Act (ORS 468.183) provides for inclusion of mandatory requirements as part of the action plan.”<sup>141</sup> The First Action Plan also relied on ODA to take mandatory action if such action was “deemed necessary.”<sup>142</sup> After 22 years, state and local officials have demonstrated their unwillingness to enact the mandatory measures required to end the endangerment to human health in the LUBGWMA, and have again kicked the can down the road indefinitely rather than taking necessary action.

This is not an abstract exercise in public-private partnership building that voluntary-only measures may help foster; real people have been expecting change, apparently in vain, for decades. As stated by the East Oregonian newspaper in 2004, “The [LUBGWMA] committee must submit an evaluation of its progress to the state every four years. As long as the group is

<sup>140</sup> Second Action Plan, App. A at 6 (emphasis added).

<sup>141</sup> First Action Plan, App. Z at 8.

<sup>142</sup> First Action Plan, App. Z at 6.

making improvements, water quality control stays in its hands. If the group is unable to encourage citizens to voluntarily solve water quality concerns, the state government will mandate what must be done.”<sup>143</sup> Then again in 2009, the East Oregonian wrote that, after testing data showed that nitrate contamination “remain[ed] stubbornly high” despite past voluntary efforts, new regulations and rules “concern[ing] how and when farmers apply nitrogen to their fields” may be necessary.<sup>144</sup> Over ten years later, with nitrate levels at all-time highs, meaningful action is necessary, and Oregon officials have proven themselves unable and unwilling to deliver.

Petitioners and those living in the LUB who rely on the area’s groundwater for everyday life can no longer depend on DEQ, OHA, ODA, or the local officials in charge of implementing corrective measures in the LUBGWMA to fix the ongoing and worsening endangerment to human health caused by nitrate contamination. Decades of objective failure to rein in nitrate pollution from the area’s CAFOs and irrigated agricultural practices have been left unaddressed by the now-operative Second Action Plan, which gives no more than a passing nod to the possibility of imposing the past due mandatory measures necessary to improve water quality. EPA must not let another 20 years pass as the problem continually gets worse and Oregon officials continue to sit on the sidelines while the threat to the health of Oregon citizens grows.

## **VI. EPA EMERGENCY ACTION IS NECESSARY TO ABATE ONGOING AND EVER-INCREASING ENDANGERMENT TO HUMAN HEALTH FROM NITRATE CONTAMINATION**

EPA’s SDWA guidance states that if EPA knows state or local agencies are going to act, EPA must decide if the actions are timely and effective.<sup>145</sup> And if they are insufficient, EPA should proceed with emergency action necessary to protect human health.<sup>146</sup> EPA action is necessary here because although state and local authorities have taken various actions to try and address nitrate contamination in the LUBGWMA over the past decades, such as testing, monitoring, and establishing action plans, these actions have not been timely or effective.<sup>147</sup> State and local officials have failed to protect public health from nitrate contamination, and their latest plan doubles down on the failed voluntary-only approach. Meanwhile, other state actions such as the continued approval and permitting of CAFO operations with inadequate protections directly undermine any efforts at improving the region’s groundwater quality. The state has its head in the sand, and is only digging itself deeper. Thus, EPA has the authority to take emergency action because although the state and local agencies have already started to act, they have not done so in a timely or effective way.

<sup>143</sup> *Women Sound Nitrate Warning*, EAST OREGONIAN (Mar. 8, 2004) (included here as Appendix AE).

<sup>144</sup> *Stubbornly High Nitrate Numbers Could Lead to DEQ Regulation*, EAST OREGONIAN (Nov. 28, 2009) (included here as Appendix AF).

<sup>145</sup> See SDWA Emergency Authority Guidance, App. B at 9, 13.

<sup>146</sup> *Id.*

<sup>147</sup> See H.R. Rep. No. 1185, 93rd Cong., 2d Sess., 35-36 (1974) (discussing the legislative intent to “direct the Administrator to refrain from precipitous preemption of effective State or local emergency abatement efforts” unless action is not timely or effective); see also SDWA Emergency Authority Guidance, App. B at 9.

The endangerment in the LUBGWMA therefore meets all of the criteria for EPA action. As discussed in detail above, the statutory prerequisites for emergency action under 42 U.S.C. § 300i are satisfied here.<sup>148</sup> First, nitrate, which is a “contaminant” under the SDWA,<sup>149</sup> is present in and continues to leach into USDWs in the LUBGWMA. Moreover, nitrate contamination has been present in and continues to be a problem for LUBGWMA’s PWSs. Second, the presence of nitrate contamination in groundwater is causing an imminent and substantial endangerment to public health; an alarming number of LUB residents rely on USDWs and PWSs that have been identified as carrying substantial nitrate risks for users. Finally, neither the State of Oregon nor Umatilla and Morrow County Soil and Water Conservation Districts have taken timely or effective action to abate the public health endangerment. Though DEQ and ODA have taken some steps to investigate the nature and scope of the threat, Oregon officials have failed to exercise their authority to effectively regulate the predominant sources of contamination, instead relying on public outreach and voluntary measures that have consistently failed to protect groundwater quality from further deterioration. And while county and city authorities have engaged in public education and research related to groundwater quality, their limited action has similarly proven insufficient to remedy the problem.

EPA has broad authority to investigate and remediate threats to public health under the SDWA in these circumstances. “Once EPA determines that action under Section 1431 is needed, a very broad range of options is available” as necessary to protect users of USDWs.<sup>150</sup> The tools available to EPA include conducting studies, halting the disposal of contaminants that may be contributing to the endangerment, and issuing orders such as mandatory changes to manure generation, handling, and land application practices.<sup>151</sup> In fact, “EPA may take such actions notwithstanding any exemption, variance, permit, license, regulation, order, or other requirement that would otherwise apply.”<sup>152</sup>

EPA should prioritize investigating and abating nitrate contamination caused by CAFOs and land application of CAFO wastes to irrigated agriculture in the LUBGWMA. As explained, these interrelated land use activities constitute the vast majority of nitrogen pollution in the region—approximately 82%—and this contamination has degraded the area’s USDWs for decades.<sup>153</sup>

Specifically, Petitioners request EPA take at least the following measures under its Section 1431 SDWA emergency powers:

- Supply a free source of clean drinking water to residents of the LUBGWMA whose wells or PWSs exceeds safe limits for nitrate;
- Conduct additional investigation and monitoring throughout the LUBGWMA to more accurately trace the sources and quantities of nitrate-nitrogen pollution, and

<sup>148</sup> See also SDWA Emergency Authority Guidance, App. B.

<sup>149</sup> 40 C.F.R. §§ 141.11(d); 141.62(b).

<sup>150</sup> SDWA Emergency Authority Guidance, App. B at 10.

<sup>151</sup> See *id.* at 10-11.

<sup>152</sup> *Id.* at 9.

<sup>153</sup> See *supra* Section IV.C.

work to identify which CAFOs and manure management practices are causing nitrate contamination;

- Issue orders requiring CAFOs and irrigated agriculture land applying CAFO waste or other nitrogen fertilizers to modify their practices so that these operations will cease overburdening the area with nitrogen pollution via lagoon leaching, land application of manure, and/or spills and leaks;
- Issue an order prohibiting the proposed Easterday Farms CAFO or any other new CAFO from opening on the failed Lost Valley Farm site or elsewhere in the LUBGWMA unless and until nitrate concentrations in the area consistently fall below the established, health-based MCL of 10 mg/L;
- Investigate Oregon's BMPs for CAFO nutrient management to determine why they have been unsuccessful at protecting groundwater in the LUBGWMA and what more effective BMPs are necessary; and
- Determine what enforcement measures should be implemented to effectively reduce nitrogen pollution from these sources, and initiate those enforcement actions as soon as practicable.

## VII. CONCLUSION

In conclusion, for the reasons and upon the bases stated above, the undersigned Petitioners respectfully request that EPA invoke its emergency authority under section 1431 of the Safe Drinking Water Act, 42 U.S.C. § 300i, to address the imminent and substantial endangerment to public health within the LUBGWMA caused by ongoing and increasing nitrate contamination. Please contact Tarah Heinzen by email at [theinzen@fwwatch.org](mailto:theinzen@fwwatch.org) or phone at (202) 683-2457 with questions or for more information regarding this petition or the basis of our request.

Respectfully Submitted January 16, 2020



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*Attach. 2*



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October 15, 2021

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**RE: COMMENTS IN OPPOSITION TO NOBLE DAIRY'S PROPOSAL TO SUBSTANTIALLY CHANGE ITS ANIMAL WASTE MANAGEMENT PLAN IN ORDER TO EXPAND AND BECOME OREGON'S NEWEST MEGA DAIRY CAFO**

Dear Ms. Short and Ms. Moore:

On September 8, 2021, the Animal Legal Defense Fund<sup>1</sup> (ALDF), as a member of Stand Up to Factory Farms, submitted comments in opposition to Noble Dairy's proposal to substantially change its Animal Waste Management Plan (AWMP) in order to expand and become Oregon's newest mega dairy confined animal feeding operation (CAFO). ALDF now submits these additional comments to reiterate its opposition to Noble Dairy's proposed expansion in light of information provided at the hearing on October 11, 2021.

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<sup>1</sup> ALDF is a national, nonprofit membership organization based in California with over 300,000 members and supporters nationwide. ALDF's mission is to protect the lives and advance the interests of animals through the legal system. Advocating for effective oversight and regulation of the industrial animal agriculture system across the United States is one of ALDF's central goals.

Information provided at the hearing made clear that this proposal is meant to paper over an illegal action that has already taken place. Rather than rubber stamp the expansion of a CAFO that has already shown disregard for Oregon’s environment and regulatory agencies, the Oregon Department of Agriculture (ODA) and Oregon Department of Environmental Quality (DEQ) (collectively “the Agencies”) should take this opportunity to ensure Noble Dairy does not do any further damage to the environment. In light of the information available to ODA and DEQ at this time, approval of the substantial changes to the Noble Dairy AWMP would be arbitrary, capricious, and otherwise contrary to law.

ALDF again urges the Agencies to deny the proposed substantial changes to Noble Dairy’s AWMP and petitions the agencies to require it to apply for an individual National Pollutant Discharge Elimination System (NPDES) permit.

## I. BACKGROUND

Noble Dairy is a large, tier 1 dairy CAFO sited in a SFHA<sup>2</sup> on the banks of the Applegate River in Josephine County, Oregon.<sup>3</sup> It recently violated the Oregon CAFO NPDES General Permit (“General Permit”)<sup>4</sup> and its AWMP by, among other things, expanding without authorization,<sup>5</sup> allowing discharges, and failing to use adequate waste storage facilities.<sup>6</sup> ODA brought an enforcement action and imposed civil penalties.<sup>7</sup>

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<sup>2</sup> Federal Emergency Management Agency (FEMA), National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0740E, Josephine County, Oregon and Incorporated Areas, Panel 0740E (Dec. 3, 2009) (“FIRM 1”) (Attach. 1).

<sup>3</sup> The CAFO is owned by Jerry Noble and co-operated by Larry and Sharon Noble, d.b.a. Jerry Noble. It is registered to the NPDES General Permit #01-2016 under Master Address number 63943. ODA AND DEQ, NOTICE OF PUBLIC PARTICIPATION OPPORTUNITY, PROPOSED SUBSTANTIAL CHANGE FOR CONFINED ANIMAL FEEDING OPERATION (CAFO) IN AREA IV (Aug. 4, 2021), [https://www.oregon.gov/oda/programs/NaturalResources/Documents/CAFOPublicNotices/2021/NoblePublicNotice.pdf?utm\\_medium=email&utm\\_source=Govdelivery](https://www.oregon.gov/oda/programs/NaturalResources/Documents/CAFOPublicNotices/2021/NoblePublicNotice.pdf?utm_medium=email&utm_source=Govdelivery).

<sup>4</sup> ODA & DEQ, OREGON CONFINED ANIMAL FEEDING OPERATION NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT NUMBER 01-2016 (Apr. 20, 2016) (“General Permit”).

<sup>5</sup> It is unclear exactly when Noble Dairy illegally expanded. But since the data reported in 2019 are what it seeks to incorporate into its substantially changed AWMP, it seems that it has been at least since January 1, 2019. *See* NUTRIENT MANAGEMENT PLAN FOR NOBLE DAIRY 2 (“AWMP”).

<sup>6</sup> OR. DEP’T OF AGRIC., CONFINED ANIMAL FEEDING OPERATION (CAFO) PROGRAM 2020 ANNUAL REPORT 19–20, <https://www.oregon.gov/oda/shared/Documents/Publications/NaturalResources/CAFOReport2020.pdf> (2020).

<sup>7</sup> *Id.*; *see* NON/POC #1927457 (on file with ODA).

According to information provided at the hearing on October 11, 2021, ODA received a complaint about Noble Dairy and subsequently performed an inspection. This inspection resulted in ODA's issuance of Notice of Noncompliance/Plan of Correction #1927457 and a Notice of Assessment of Civil Penalty in the amount of \$38,584.<sup>8</sup> According to ODA's 2020 Annual Report, Noble Dairy violated the following provisions of the Oregon CAFO National Pollutant Discharge Elimination System General Permit #01.<sup>9</sup>

- S2.A Prohibitions and Discharge Limitations
- S2.E Waste Storage Facilities
- S2.F Prevention of System Overload
- S2.I Maintaining Compliance if System Fails
- S3.A Animal Waste Management Plan
- S3.D Requirements for Animal Waste Management Plan Updates and Changes
- S4.B Inspection Requirements
- S4.C Record Keeping and Availability Requirements
- S4.D Reporting Requirements

Now, Noble Dairy proposes to substantially change its AWMP to paper over its illegal expansion and make it legal going forward. Specifically, Noble Dairy proposes to **nearly double** the number of cows it is permitted to confine (from 1,630 cows to 2,900 cows) and the number of acres of land it is permitted to use for manure disposal by land application (from 810.3 acres to 1,412 acres).<sup>10</sup> If the Agencies approve this proposal, Noble Dairy will officially become Oregon's newest mega dairy CAFO.<sup>11</sup>

Noble Dairy has been producing massive quantities of waste and storing it in a SFHA on the banks of the Applegate River, and it seeks to continue doing so under a substantially changed AWMP.<sup>12</sup> In 2019, Noble Dairy reported that it generated 748,104 cubic feet of solid manure and disposed of 12,420 cubic feet of

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<sup>8</sup> Or. Dep't of Agric., *supra* note 6, at 19–20; NON/POC #1927457, *supra* note 7.

<sup>9</sup> Or. Dep't of Agric., *supra* note 6, at 19–20.

<sup>10</sup> AWMP, *supra* note 5, at 2; NUTRIENT MANAGEMENT PLAN FOR NOBLE DAIRY, SUPPLEMENTAL DOCUMENTS, MODIFICATION OF ANIMAL NUMBERS TO CONFINED ANIMAL FEEDING OPERATION NPDES OR WPCF PERMIT REGISTRATIONS.

<sup>11</sup> Legislation that would enact a mega dairy moratorium, which was introduced this year in Oregon, defines a “mega dairy” as one that has 2,500 cows or more. S.B. 0583, 81st Leg. Assemb., 2021 Reg. Session (Or. 2021); H.B. 2924, 81st Leg. Assemb., 2021 Reg. Session (Or. 2021). These comments adopt that definition.

<sup>12</sup> See *supra* note 5.

solid manure on fields.<sup>13</sup> It reported that it generated 1,460,094 cubic feet—or **10,922,262 gallons**—of liquid manure, manure-contaminated runoff, and manure-contaminated process water.<sup>14</sup> The CAFO also reported that it disposed of 2,586,722 cubic feet—or **19,350,024 gallons**—of liquid waste on 1,412 acres of nearby fields (“disposal fields”), many of which are also located on the banks of the Applegate River and/or in the SFHA.<sup>15</sup>

The Applegate River, a “major tributary of the Rogue River” that “drains a large portion of the eastern Siskiyou Mountains,” is an invaluable natural resource.<sup>16</sup> The river and its tributaries are home to many species of fish, including steelhead, rainbow, cutthroat, and brook trout,<sup>17</sup> and the river’s drainage is home to the endangered Siskiyou Mountains salamander.<sup>18</sup> The river and its shoreline are used for many forms of recreation, including camping, swimming, and hiking.<sup>19</sup>

## II. COMMENTS

ALDF urges the Agencies to deny the proposed substantial changes to Noble Dairy’s AWMP, which substantial evidence shows is noncompliant with the General Permit.<sup>20</sup> ALDF also petitions the Agencies to require Noble Dairy to apply for an individual NPDES permit.<sup>21</sup> Given the circumstances, including this CAFO’s demonstrated disregard for its legal obligations, as discussed above, the proposed substantial changes to the AWMP would exacerbate the already significant risk that this CAFO poses to the environment and would increase the risk of another

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<sup>13</sup> AWMP, *supra* note 5, at 2.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.* (810.3 of these acres are already permitted under the AWMP, but 601.3 acres are not permitted).

<sup>16</sup> *Applegate River*, U.S. FOREST SERV., <https://www.fs.usda.gov/recarea/rogue-siskiyou/recarea/?recid=74287> (last visited Oct. 15, 2021).

<sup>17</sup> *Id.*

<sup>18</sup> DAVID CLAYTON, DEANNA OLSON, & RICHARD NAUMAN, U.S. FOREST SERV., CONSERVATION ASSESSMENT FOR THE SISKIYOU MOUNTAINS SALAMANDER (*PLETHODON STORMI*) 8–9 (2005), <https://www.blm.gov/or/plans/surveyandmanage/files/ca-ha-plethodon-stormi-2005-09-01.pdf>.

<sup>19</sup> Applegate River, *supra* note 16.

<sup>20</sup> See General Permit, *supra* note 4.

<sup>21</sup> Any interested person may petition the Agencies to require an individual NPDES permit. Or. Admin. R. 340-045-0033(10)(c). Grounds for requiring an individual NPDES permit include that the activity significantly contributes pollution or “creates other environmental problems,” that the permittee is out of compliance with the General Permit or any applicable law, or “[a]ny other relevant factors.” Or. Admin. R. 340-045-0033(10)(c)(A), (B), and (F).

regulatory catastrophe like Lost Valley Farm.<sup>22</sup> Accordingly, to approve the substantial changes to the AWMP would be arbitrary, capricious, and otherwise contrary to law.

Noble Dairy is required to ensure that its AWMP complies with the terms and conditions of the General Permit.<sup>23</sup> The AWMP fails to comply with these terms and conditions, and not without consequence—the CAFO’s location in an SFHA on the Applegate River makes it a ticking environmental time bomb. The proposed substantial changes to the AWMP would exacerbate existing risk to the environment by allowing the CAFO to continue producing increased quantities of manure and other pollutants, making any flood-related discharges—or any other discharges—to the Applegate River even more catastrophic.<sup>24</sup> The Agencies should deny the proposed substantial changes to the AWMP and require Noble Dairy to apply for an individual NPDES permit that addresses and mitigates the unique environmental risks that this CAFO already presents.

The General Permit provides that AWMPs must, among other things:

- “[E]nsure collection, handling, and storage of contaminated stormwater runoff from the production area, manure, litter, and process wastewater in compliance with the requirements of [Section 2],”<sup>25</sup> including the requirement that “permit registrant[s] must *site*, design, construct, *operate*, and maintain all waste storage facilities to contain all manure, litter, process wastewater, and stormwater runoff and direct precipitation from a 25-year, 24-hour rainfall event[.]”<sup>26</sup>

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<sup>22</sup> Lost Valley Farm was a permitted mega dairy CAFO in Boardman, Oregon that spilled manure and other waste; violated its permit more than two hundred times; went into business without a legal and practical source of water; and resorted to the stockwatering exemption in a designated Critical Groundwater Area. The state was forced to expend its limited resources to shut down this mega dairy CAFO and manage the fallout. Allowing Noble Dairy to become a mega dairy CAFO while continuing to operate in a SFHA on the banks of the Applegate River is a recipe for a similar environmental disaster—especially since it has already shown disregard for its legal obligations.

<sup>23</sup> General Permit, *supra* note 4, at S3.C.1.

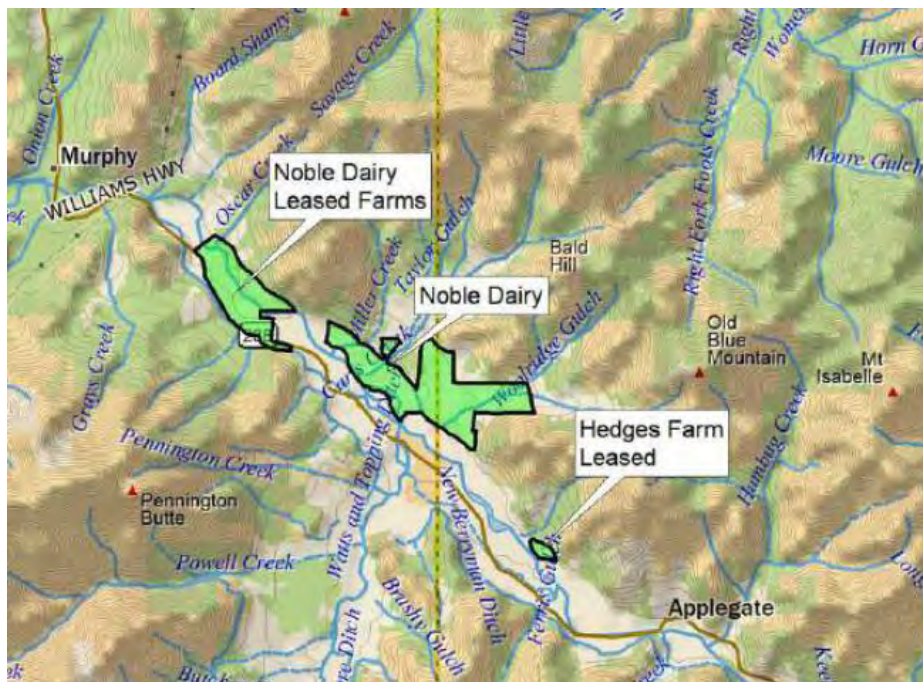
<sup>24</sup> See Or. Admin. R. 603-074-0005 (“In interpreting and applying these rules [the Agencies] may consider . . . the potential for a particular confined animal feeding operation to cause a discharge of animal wastes into the waters of the state.”).

<sup>25</sup> General Permit, *supra* note 4, at S3.C.2.(a).

<sup>26</sup> *Id.* at S2.E.2 (emphasis added).

- “[P]revent direct contact of confined animals with surface water,”<sup>27</sup> which means “any situation where animals in the production area have free access and are allowed to loiter or drop waste in surface water.”<sup>28</sup>

Noble Dairy is not in compliance with these terms and conditions—nor can it be so long as it is sited in an SFHA on the banks of the Applegate River, as depicted below.<sup>29</sup> One of the disposal field areas, the “Noble Dairy Leased Farms,” even *straddles* the Applegate River.<sup>30</sup>



Noble Dairy’s production area is a stone’s throw from the Applegate River. This area includes cow confinement buildings and two large liquid manure impoundments (“Big Pond 1” and “Big Pond 2”), as depicted below.<sup>31</sup> The “Home 2” and “Home 3” disposal fields, which Noble Dairy uses as “vegetated treatment areas,” are all that lies between the production area and the Applegate River.<sup>32</sup>

<sup>27</sup> *Id.* at S3.C.2.(e).

<sup>28</sup> *Id.* at S2.D.

<sup>29</sup> AWMP, *supra* note 5, at 9.

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at 22.

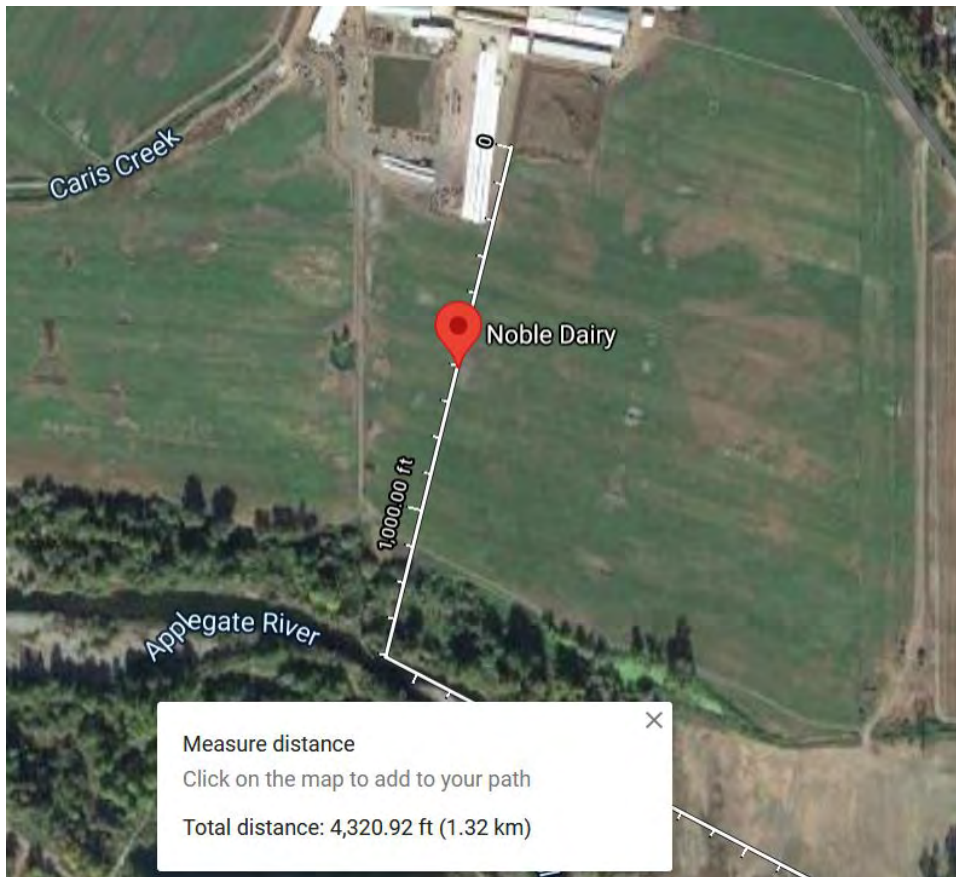
<sup>32</sup> *Id.* at 21; 23 (describing and depicting “Home 2” and “Home 3” fields).



As depicted below,<sup>33</sup> “Big Pond 1” is approximately 1,370 feet from the Applegate River and “Big Pond 2” is approximately 4,321 feet from the Applegate River. In addition, Carris Creek also runs right alongside the western side of the production area, with “Big Pond 1” lying approximately 258 feet away from the creek and “Big Pond 2” lying approximately 636 feet away.

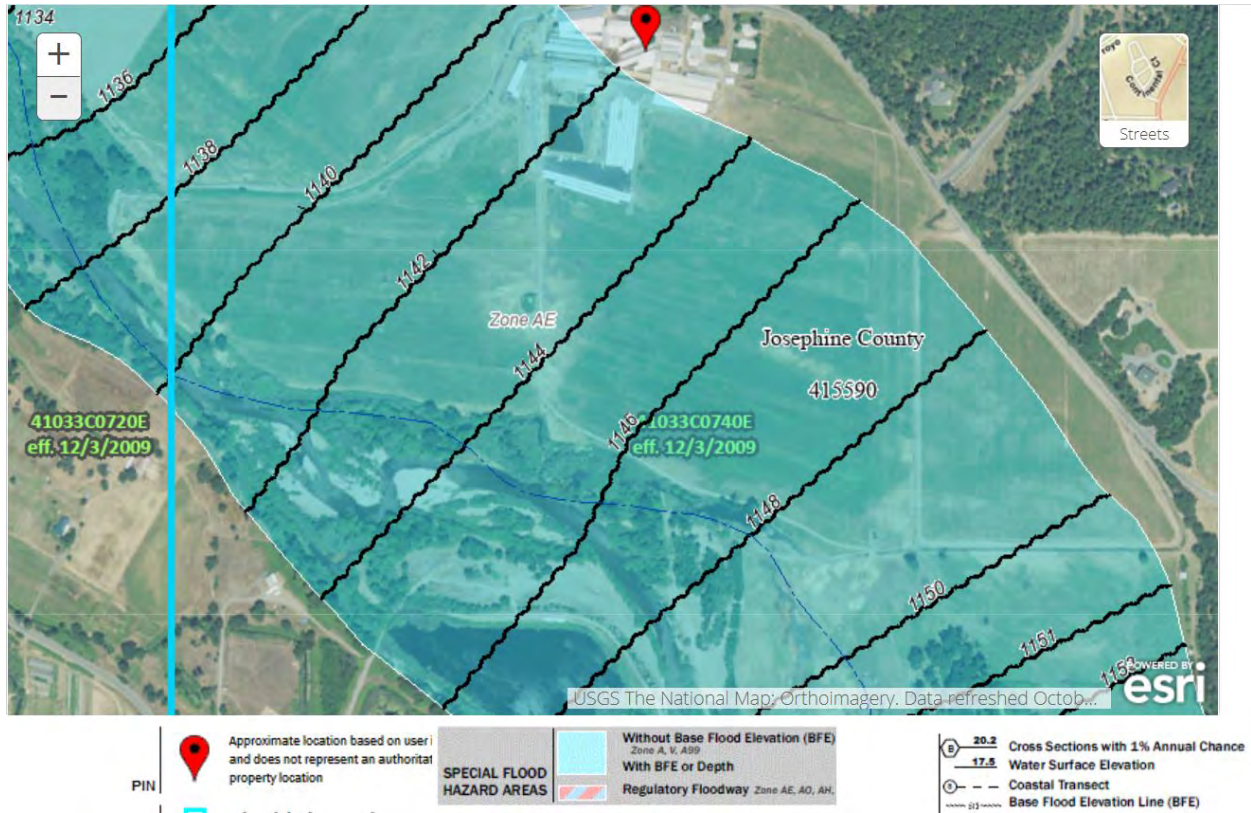
<sup>33</sup> GOOGLE MAPS, <https://www.google.com/maps/place/Noble+Dairy/@42.3059917,-123.2465208,972m/data=!3m1!1e3!4m5!3m4!1s0x0:0x8d9a9346d87d611!8m2!3d42.305107!4d-123.2434631> (last visited Oct. 15, 2021).







As depicted below, much of the production area (as well as disposal fields “Home 2” and “Home 3”) lies beneath a SFHA, as designated by the Federal Emergency Management Agency (FEMA).<sup>34</sup> This includes many of the buildings where cows are confined. It also includes “Big Pond 1,” which contains 2,147,530 gallons of liquid manure, and “Big Pond 2,” which contains 2,312,939 gallons of liquid manure.<sup>35</sup> Together, these “ponds” alone hold nearly **4.5 million gallons of liquid manure**. If these “ponds” were inundated in a flood, the environmental impact would be catastrophic.

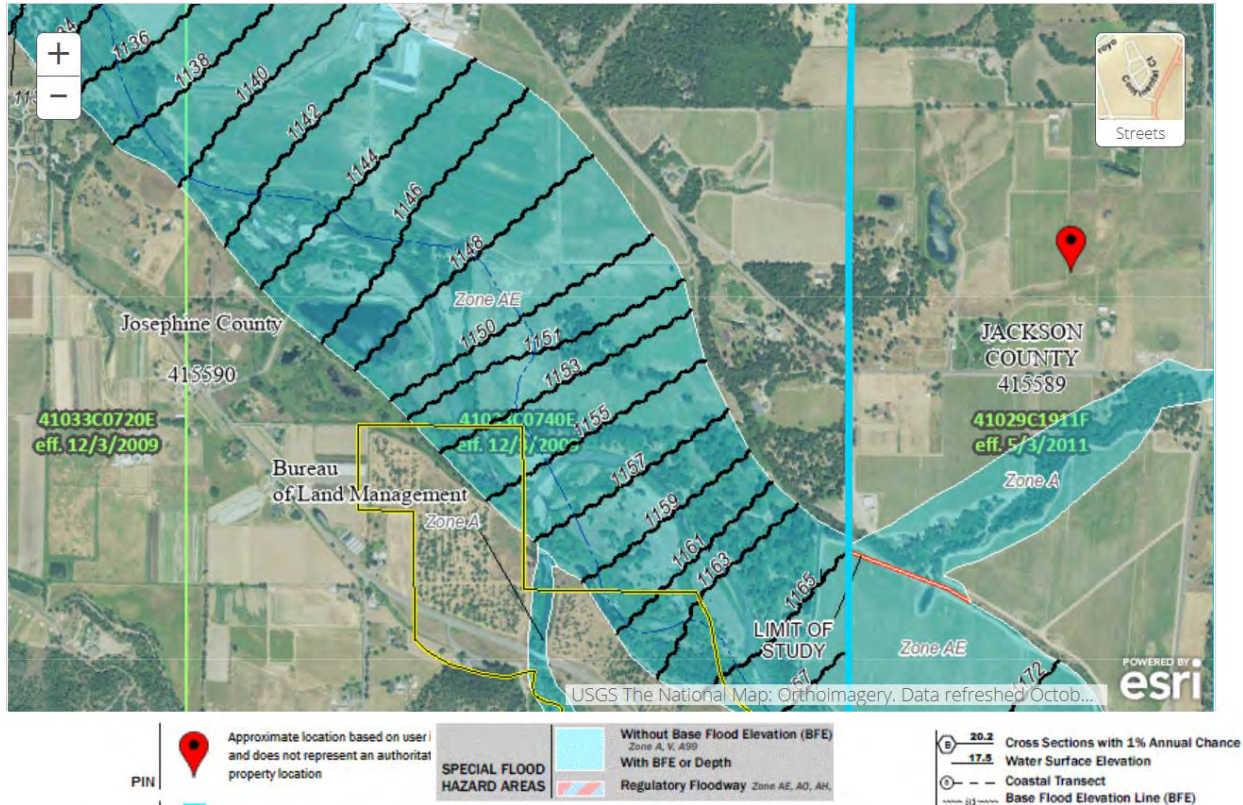


As depicted below, almost all of Noble Dairy’s disposal fields—including “Home 4,” “Mac L,” “Lynch L,” “Andreas 1(L),” “Andreas 2(L),” “Andreas 3(L),”

<sup>34</sup> FIRM 1, *supra* note 2 (Attach. 1); see *Special Flood Hazard Area (SFHA)*, FEMA, [fema.gov/glossary/special-flood-hazard-area-sfha](https://www.fema.gov/glossary/special-flood-hazard-area-sfha) (last visited Oct. 15, 2021) (defining “Special Flood Hazard Area” as “[a]n area having special flood, mudflow or flood-related erosion hazards and shown on . . . a Flood Insurance Rate Map (FIRM) Zone A, AO, A1-A30, **AE**, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V” (emphasis added)); FEMA, UNIT 3: NFIP FLOOD STUDIES AND MAPS 3-5 (explaining that SFHAs have a 4% chance of being hit with a 25-year flood within one year, a 34% chance within ten years, a 56% chance within twenty years, a 71% chance within thirty years, and an 87% chance within fifty years).

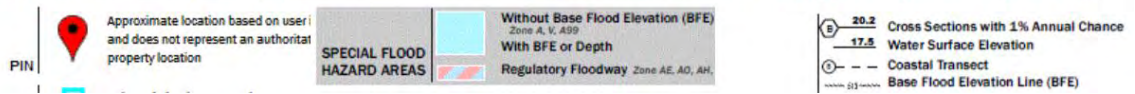
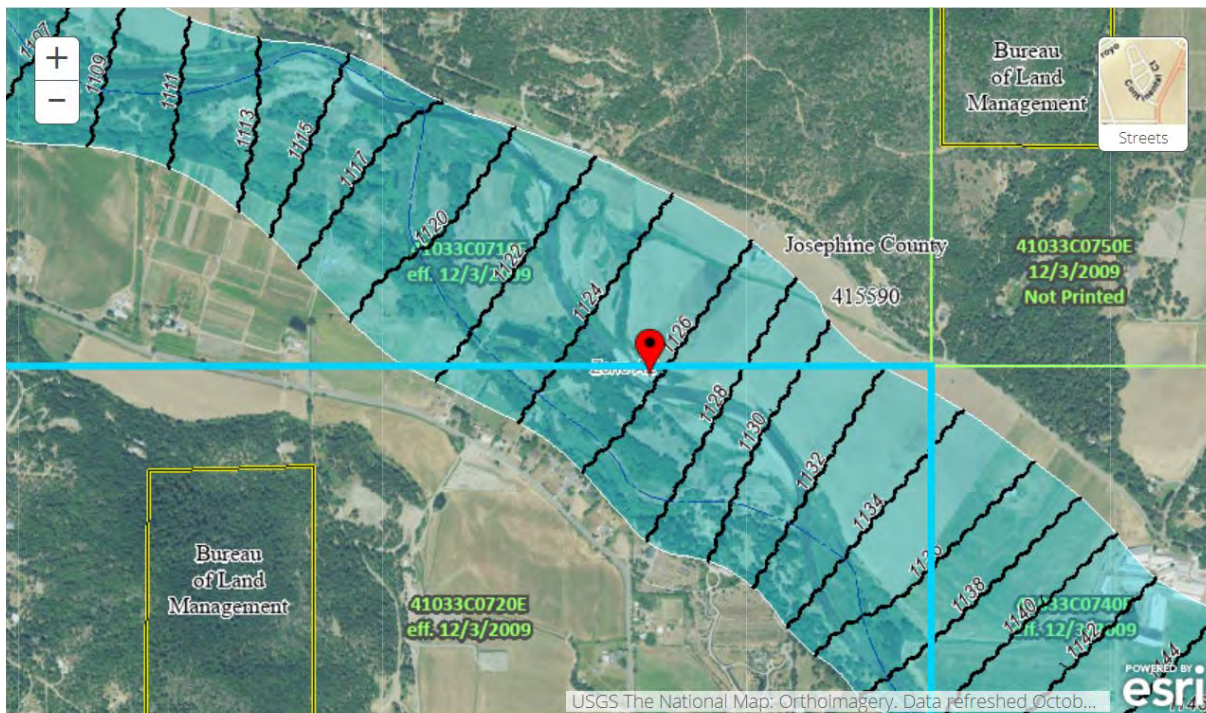
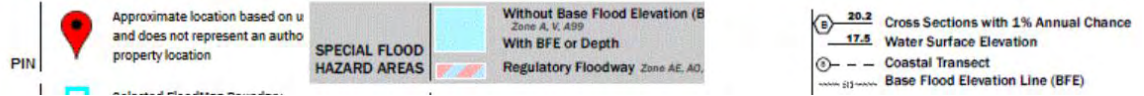
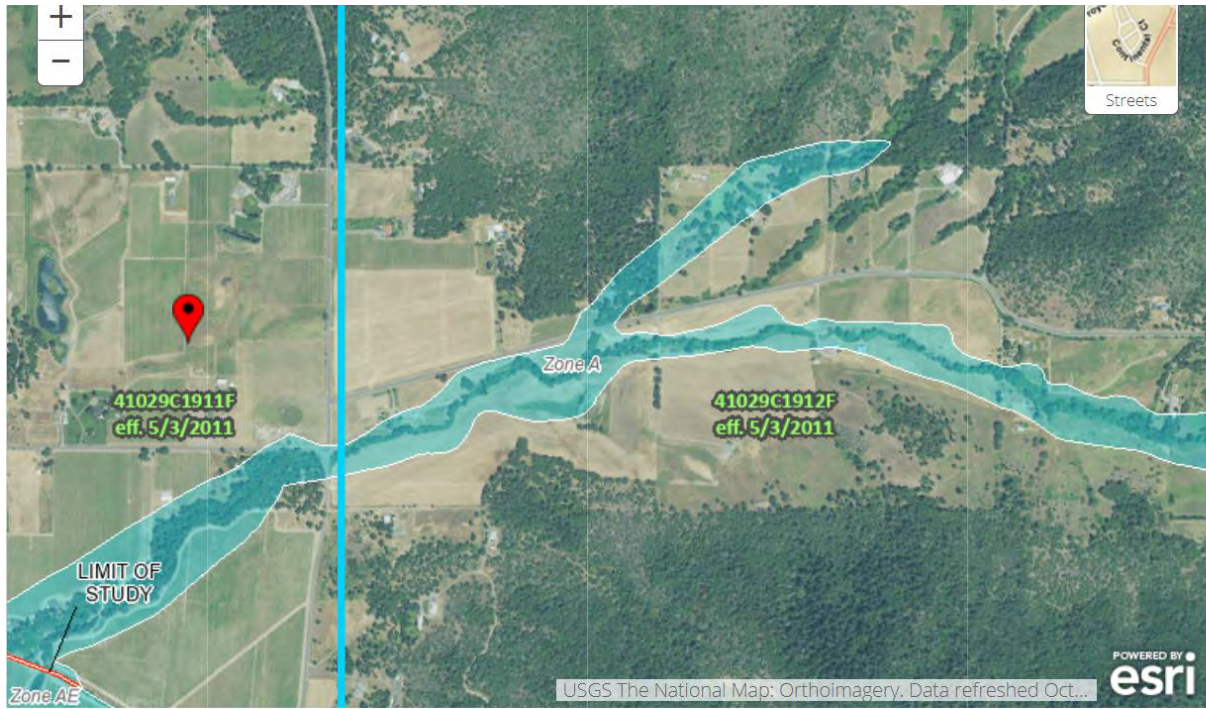
<sup>35</sup> AWMP, *supra* note 5, at 9.

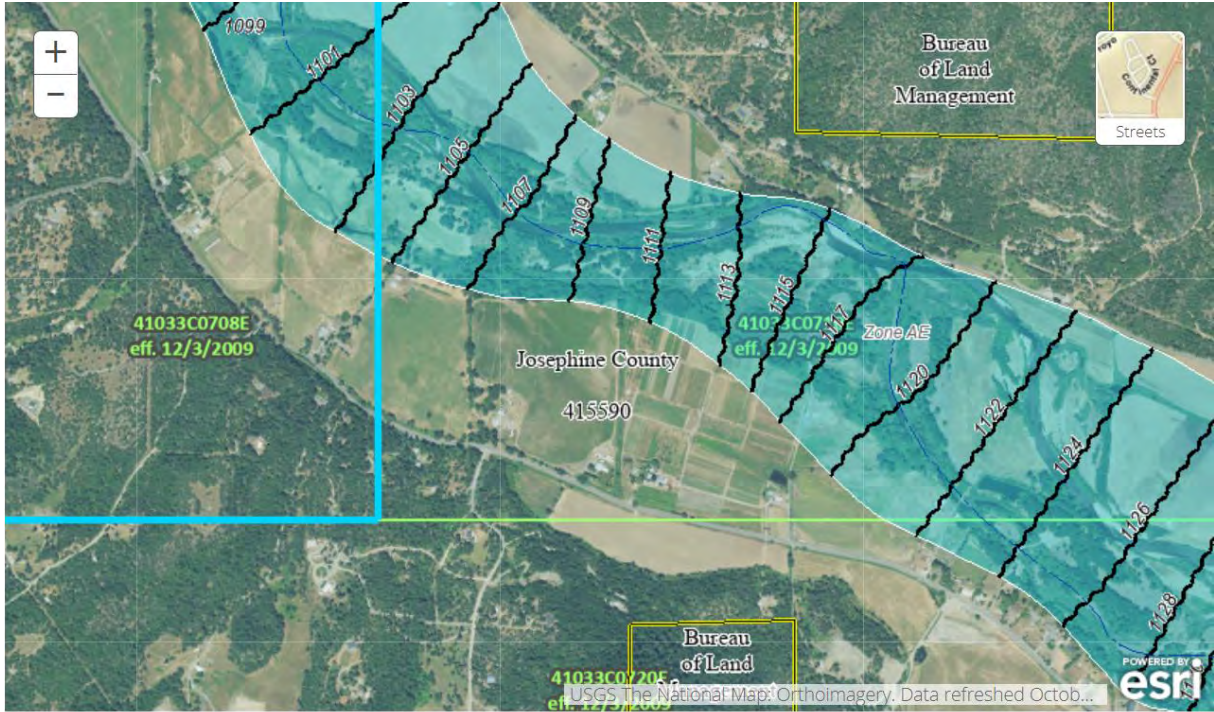
“Rice,” “Gallos 1,” “Gallos 2,” “Gallos 3,” “SorensensL,” “HydeL,” “HannaganL,” “TwinL,” and “HeisnersL”<sup>36</sup>—also lie at least partially beneath a FEMA-designated SFHA.<sup>37</sup> If these disposal fields were inundated in a flood, the environmental impact would be catastrophic.



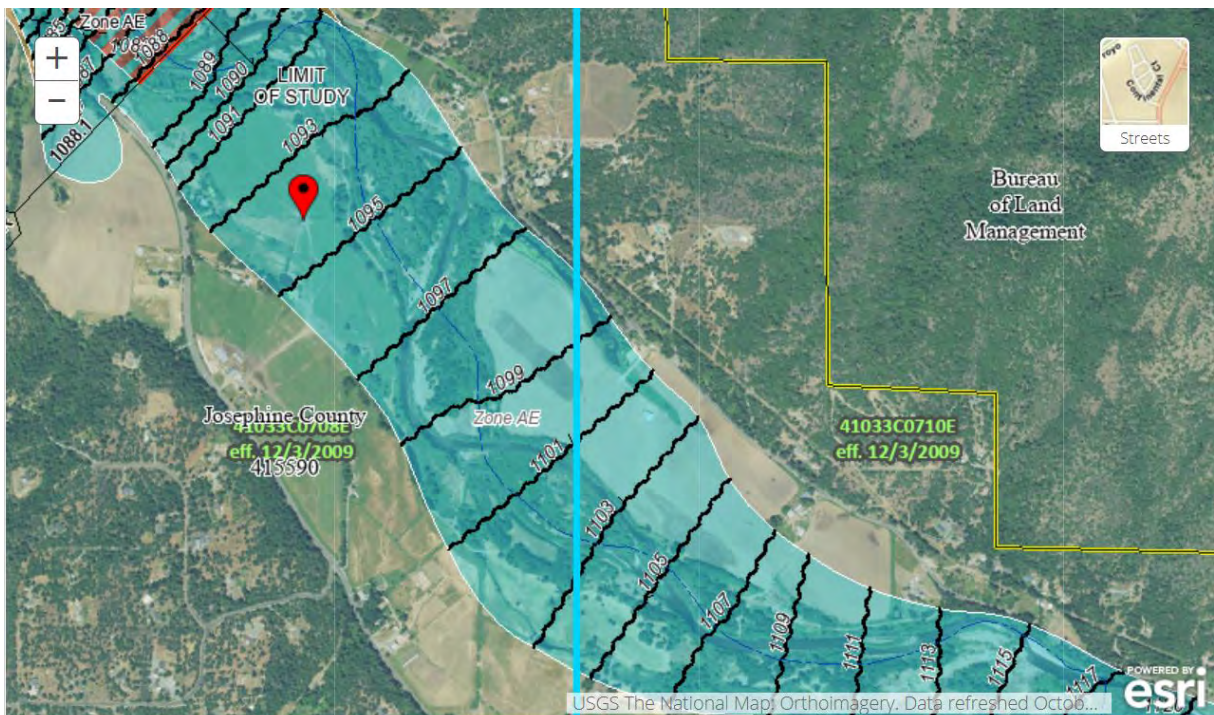
<sup>36</sup> *Id.* at 23; 24.

<sup>37</sup> FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41029C1911F, Josephine County, Oregon and Incorporated Areas, Panel 1911F (May 3, 2011) (Attach. 2); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41029C1912F, Josephine County, Oregon and Incorporated Areas, Panel 1912F (May 3, 2011) (Attach. 3); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0710E, Josephine County, Oregon and Incorporated Areas, Panel 0710E (Dec. 3, 2009) (Attach. 4); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0720E, Josephine County, Oregon and Incorporated Areas, Panel 0720E (Dec. 3, 2009) (Attach. 5); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0708E, Josephine County, Oregon and Incorporated Areas, Panel 0708E (Dec. 3, 2009) (Attach. 6).





PIN Approximate location based on user and does not represent an authoritative property location



PIN Approximate location based on user and does not represent an authoritative property location

The evidence is clear: Noble Dairy is sited in an SFHA. As discussed above, this means that Noble Dairy has a 4% chance of being hit with a 25-year flood within one year, a 34% chance within ten years, a 56% chance within twenty years, a 71% chance within thirty years, and an 87% chance within fifty years.<sup>38</sup> And these odds may actually be even higher, as wildfires driven by climate change are increasing the risk of flooding.<sup>39</sup>

When such a flood does occur, Noble Dairy's two large liquid manure impoundments (and any other manure storage facilities located in the production area)<sup>40</sup> will be inundated by the floodwaters of the Applegate River (and potentially Carris Creek). In addition, the cows who are confined in the buildings located in the production area will come into direct contact with the floodwaters of the Applegate River—and they may even drown.<sup>41</sup>

Therefore, Noble Dairy's AWMP does not—and cannot—comply with the terms and conditions of the General Permit.<sup>42</sup> Noble Dairy has failed to site and operate its waste storage facilities to contain all manure, process wastewater, stormwater runoff, and direct precipitation from a 25-year, 24-hour rainfall event.<sup>43</sup> It has also sited the majority of its disposal fields in a SFHA. Finally, Noble Dairy has failed to site and operate its production area such that it can prevent cows from coming into direct contact with the Applegate River (and potentially Carris Creek) during a flood.<sup>44</sup> No CAFO should be sited in an SFHA in the first place, but one that is already sited there should certainly not be allowed to expand—especially when it has already demonstrated disregard for the General Permit and its AWMP.

### III. CONCLUSION

For the foregoing reasons, the Agencies must deny the proposed substantial changes to Noble Dairy's AWMP and require Noble Dairy to apply for an individual NPDES permit that addresses and mitigates the unique environmental risks that this CAFO already presents.

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<sup>38</sup> See Unit 3: NFIP Flood Studies and Maps, *supra* note 34, at 3-5).

<sup>39</sup> FEMA, FLOOD AFTER FIRE FACT SHEET (Jan. 2012), [https://www.ready.gov/sites/default/files/Flood\\_After\\_Fire\\_Fact\\_Sheet.pdf](https://www.ready.gov/sites/default/files/Flood_After_Fire_Fact_Sheet.pdf).

<sup>40</sup> See AWMP, *supra* note 5, at 3.

<sup>41</sup> The cows will not be saved and will still come into direct contact with the Applegate River even if they are out to pasture when a flood occurs—most of the disposal fields that are also used as pasture are also in SFHAs. AWMP, *supra* note 5, at 51.

<sup>42</sup> See *supra* notes 25–28.

<sup>43</sup> See *supra* notes 25–26.

<sup>44</sup> See *supra* notes 27–28.

Sincerely,

A handwritten signature in black ink that reads "Christine Ball-Blakely". The signature is written in a cursive, flowing style.

**Christine Ball-Blakely**  
Staff Attorney  
**ANIMAL LEGAL DEFENSE FUND**  
cblakely@aldf.org



*Attach. 1*

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Oregon State Plane South Zone (FIPS zone 3602). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
S/MC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

**Base map** information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Josephine County and the State of Oregon. This information was compiled from Josephine County (2008), Oregon Water Resources Department (2006), OR/WA Bureau of Land Management (2000), U.S. Fish and Wildlife Service (2008), Oregon Parks and Recreation Department (2008), and National Geodetic Survey (2007) at a scale of 1:24,000.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfip/>.



**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD  
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, AV, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE AE** No Base Flood Elevations determined.
- ZONE AH** Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AR** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE AV** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE  
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.
- OTHER AREAS
- ZONE D** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*  
(EL 987)  
Base Flood Elevation value where uniform within zone; elevation in feet\*

\*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Oregon State Plane South Zone (FIPS Zone 3602), Lambert Conformal Conic projection
- 48° 00' 00" N 1000-meter Universal Transverse Mercator grid values, zone 10N
- DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M 1.5 River Mile

MAP REPOSITORIES  
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
DECEMBER 3, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0740E

**FIRM**  
FLOOD INSURANCE RATE MAP  
JOSEPHINE COUNTY,  
OREGON  
AND INCORPORATED AREAS

PANEL 740 OF 1175  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0740	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER  
41033C0740E  
EFFECTIVE DATE  
DECEMBER 3, 2009  
Federal Emergency Management Agency

*Attach. 2*

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 10. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
SSMIC-3, #6202  
1315 East-West Highway  
Silver Spring, MD 20910-3282

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**Base map** information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Jackson County GIS Services, State of Oregon OLCD, and the National Geodetic Survey. This information was compiled at various map scales during the time period 2003-2006.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

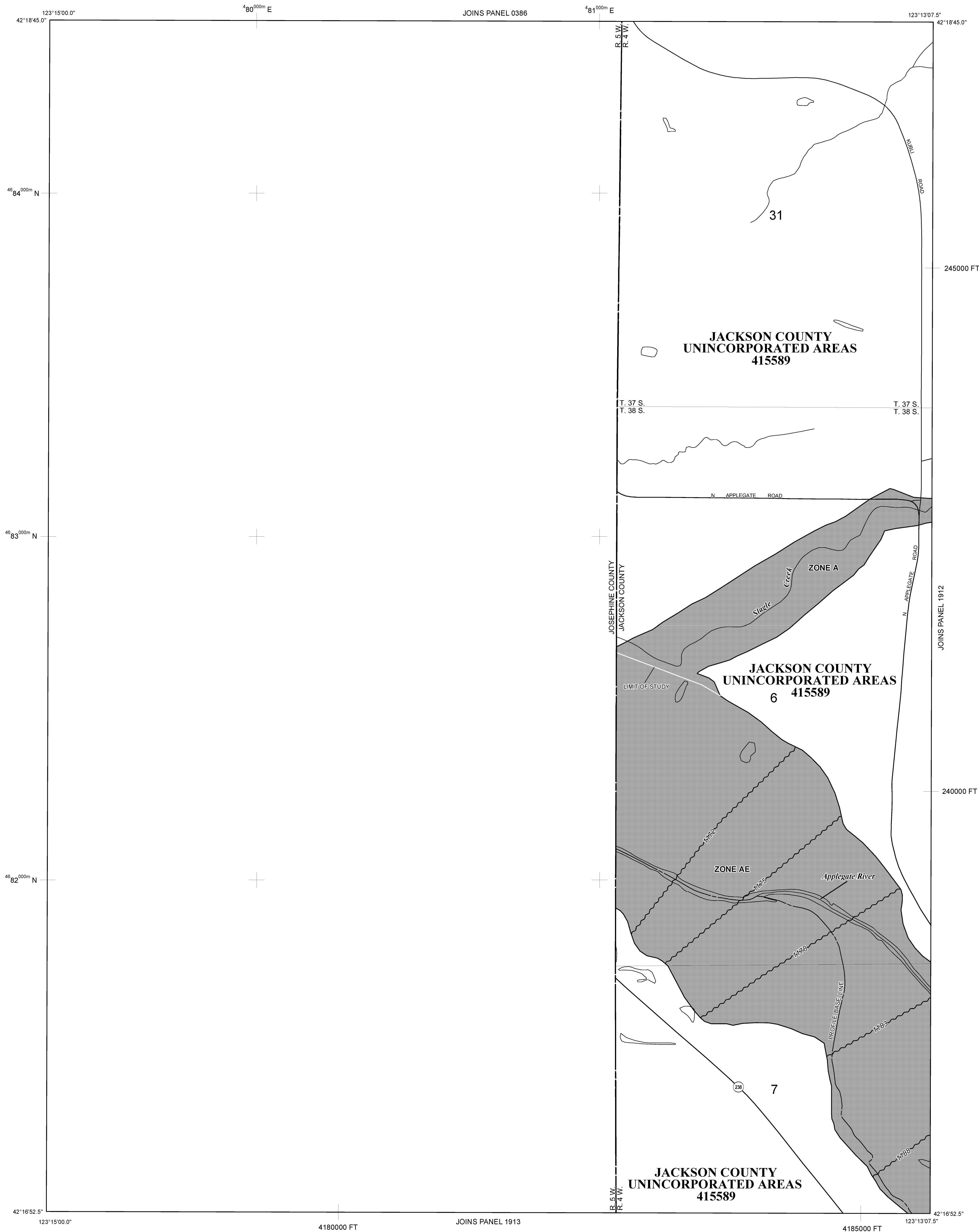
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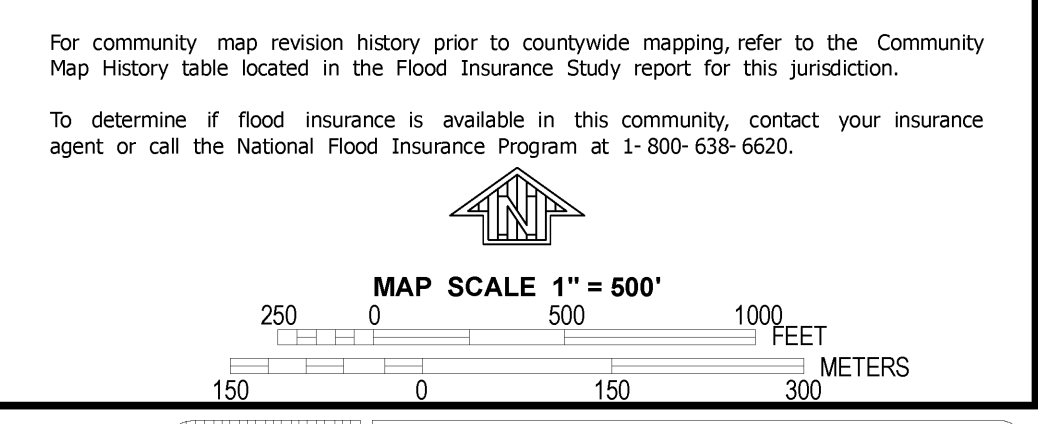
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**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
- The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A**  
No Base Flood Elevations determined.
- ZONE AE**  
Base Flood Elevations determined.
- ZONE AH**  
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO**  
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR**  
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently de-certified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99**  
Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V**  
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE**  
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X**  
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS
- ZONE X**  
Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D**  
Areas in which flood hazards are undetermined, but possible.
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- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- Floodplain boundary
- Floodway boundary
- Zone boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*
- \* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid ticks, zone 10
- 5000-foot grid ticks: Oregon State Plane coordinate system, south zone (FIPSZONE 3602), Lambert Conformal Conic
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile
- MAP REPOSITORIES  
Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
May 3, 2011
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 1911F**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**JACKSON COUNTY,**  
**OREGON**  
**AND INCORPORATED AREAS**

**PANEL 1911 OF 2327**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
JACKSON COUNTY	415589	1911	F

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

**FEDERAL EMERGENCY MANAGEMENT AGENCY**

**MAP NUMBER**  
**41029C1911F**

**EFFECTIVE DATE**  
**MAY 3, 2011**

*Attach. 3*

**NOTES TO USERS**

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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NGS Information Services  
NOAA/NNGS12  
National Geodetic Survey  
SSM/C-3, #6222  
1315 East-West Highway  
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**Base map** information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Jackson County GIS Services, State of Oregon OLCD, and the National Geodetic Survey. This information was compiled at various map scales during the time period 2003-2006.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

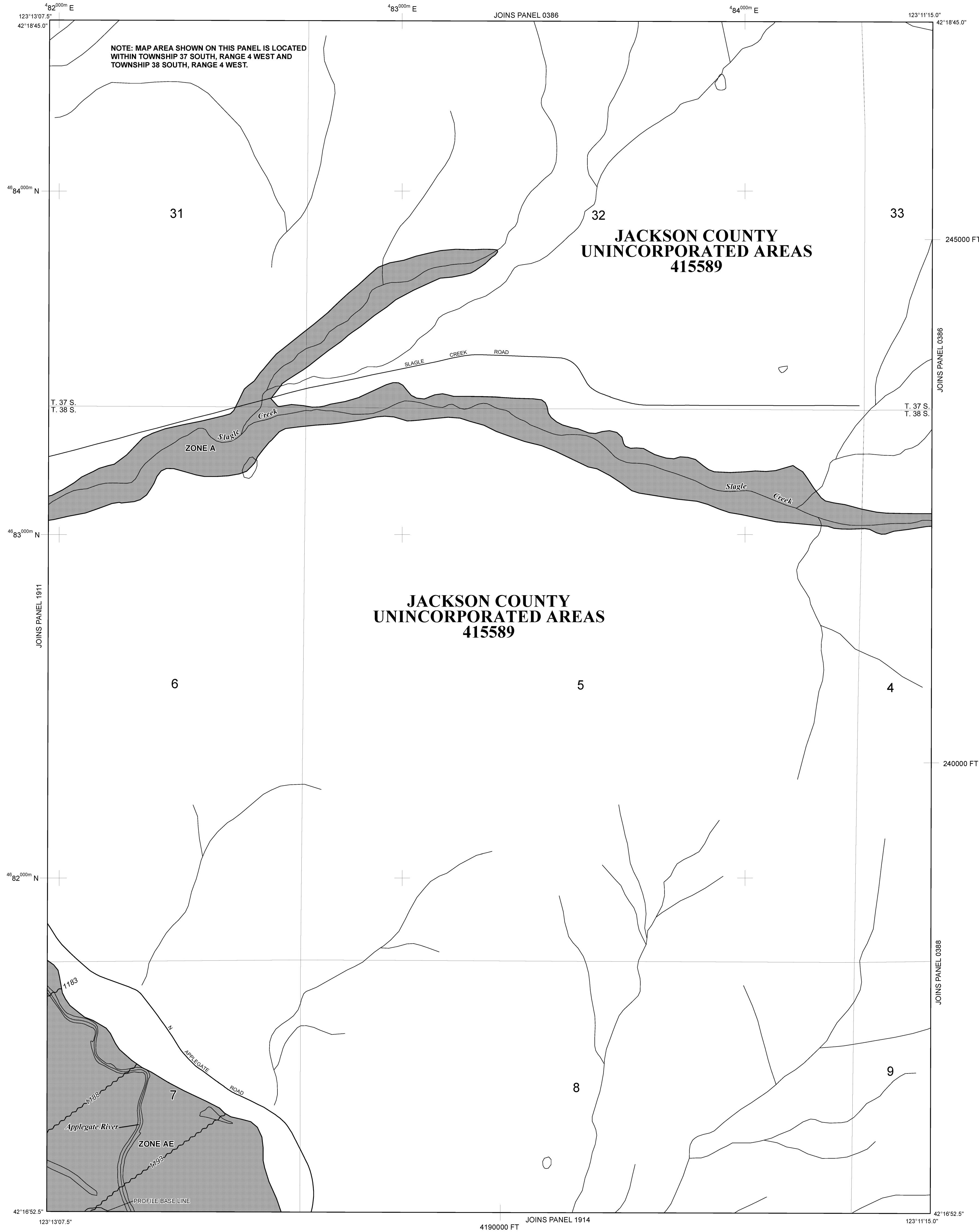
**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Information eXchange at 1-877-FEMA MAP (1-877-336-2627)** for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Information eXchange may also be reached by Fax at 1-800-358-9620 and its website at <http://www.msc.fema.gov/>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP (1-877-336-2627)** or visit the FEMA website at <http://www.fema.gov/>.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the profile baseline, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently de-certified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary  
Floodway boundary  
Zone boundary  
Zone D boundary  
CBRS and OPA boundary  
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.  
Base Flood Elevation line and value; elevation in feet\*  
Base Flood Elevation value where uniform within zone; elevation in feet\*  
\* Referenced to the North American Vertical Datum of 1988 (NAVD 88)  
Cross section line  
Transect line  
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)  
1000-meter Universal Transverse Mercator grid ticks, zone 10  
5000-foot grid ticks: Oregon State Plane coordinate system, south zone (FIPSZONE 3602), Lambert Conformal Conic  
Bench mark (see explanation in Notes to Users section of this FIRM panel)  
River Mile  
MAP REPOSITORIES  
Refer to Map Repositories list on Map Index  
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
May 3, 2011  
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

**MAP SCALE 1" = 600'**

250 0 500 1000 FEET  
150 0 150 300 METERS

**NFIP**

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 1912F**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**JACKSON COUNTY, OREGON AND INCORPORATED AREAS**

**PANEL 1912 OF 2327**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
JACKSON COUNTY	415589	1912	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER 41029C1912F**

**EFFECTIVE DATE MAY 3, 2011**

**Federal Emergency Management Agency**

*Attach. 4*

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Oregon State Plane South Zone (FIPS zone 3602). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
S/MC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

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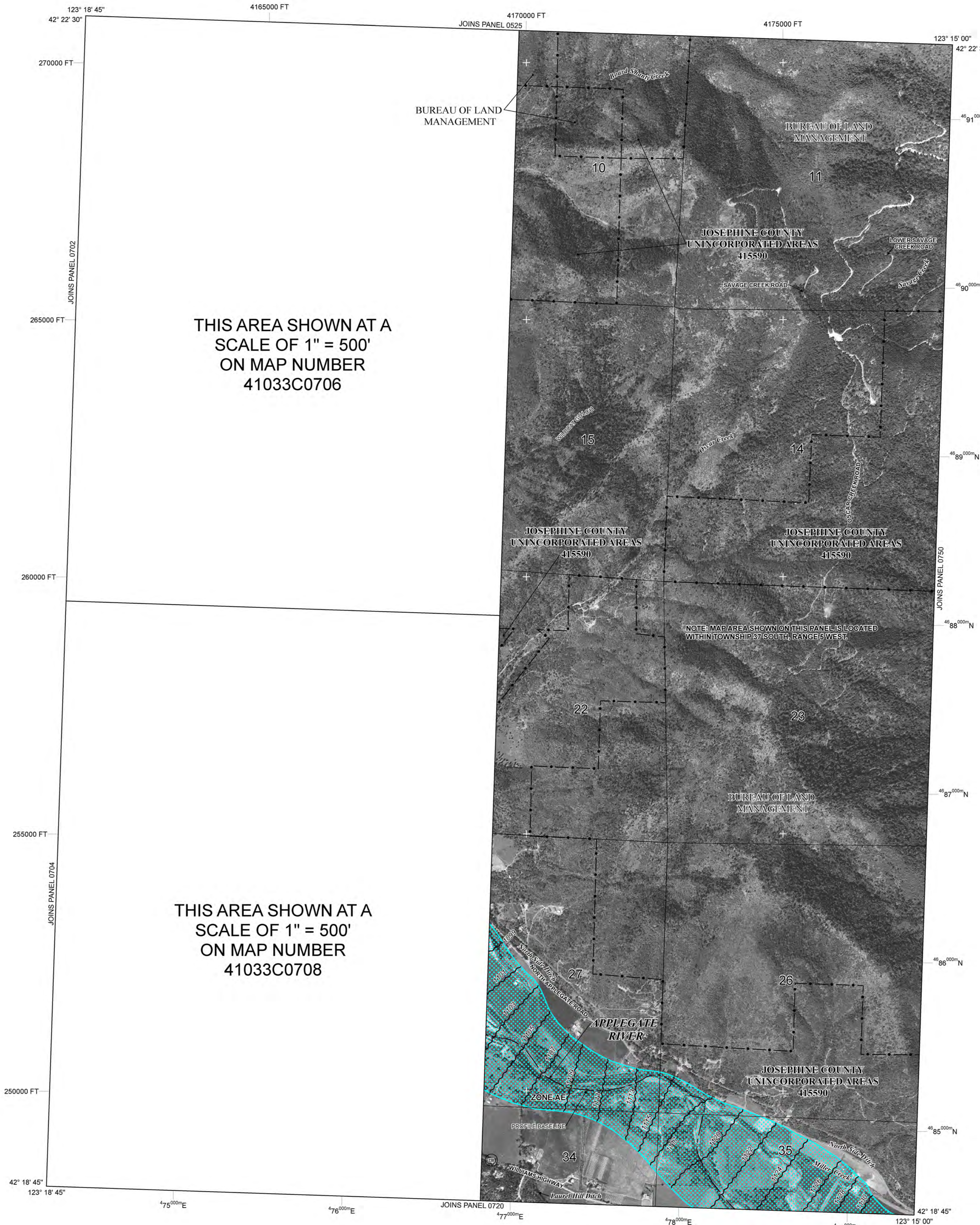
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**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
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- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*

\*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Oregon State Plane South Zone (FIPS Zone 3602), Lambert Conformal Conic projection
- 48° 89' 00" N 1000-meter Universal Transverse Mercator grid values, zone 10N
- DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M 1.5 River Mile
- MAP REPOSITORIES Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP DECEMBER 3, 2009
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0710E

**FIRM**

**FLOOD INSURANCE RATE MAP**

**JOSEPHINE COUNTY, OREGON AND INCORPORATED AREAS**

PANEL 710 OF 1175  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0710	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41033C0710E

EFFECTIVE DATE DECEMBER 3, 2009

Federal Emergency Management Agency



*Attach. 5*

**NOTES TO USERS**

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NOAA, NNGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

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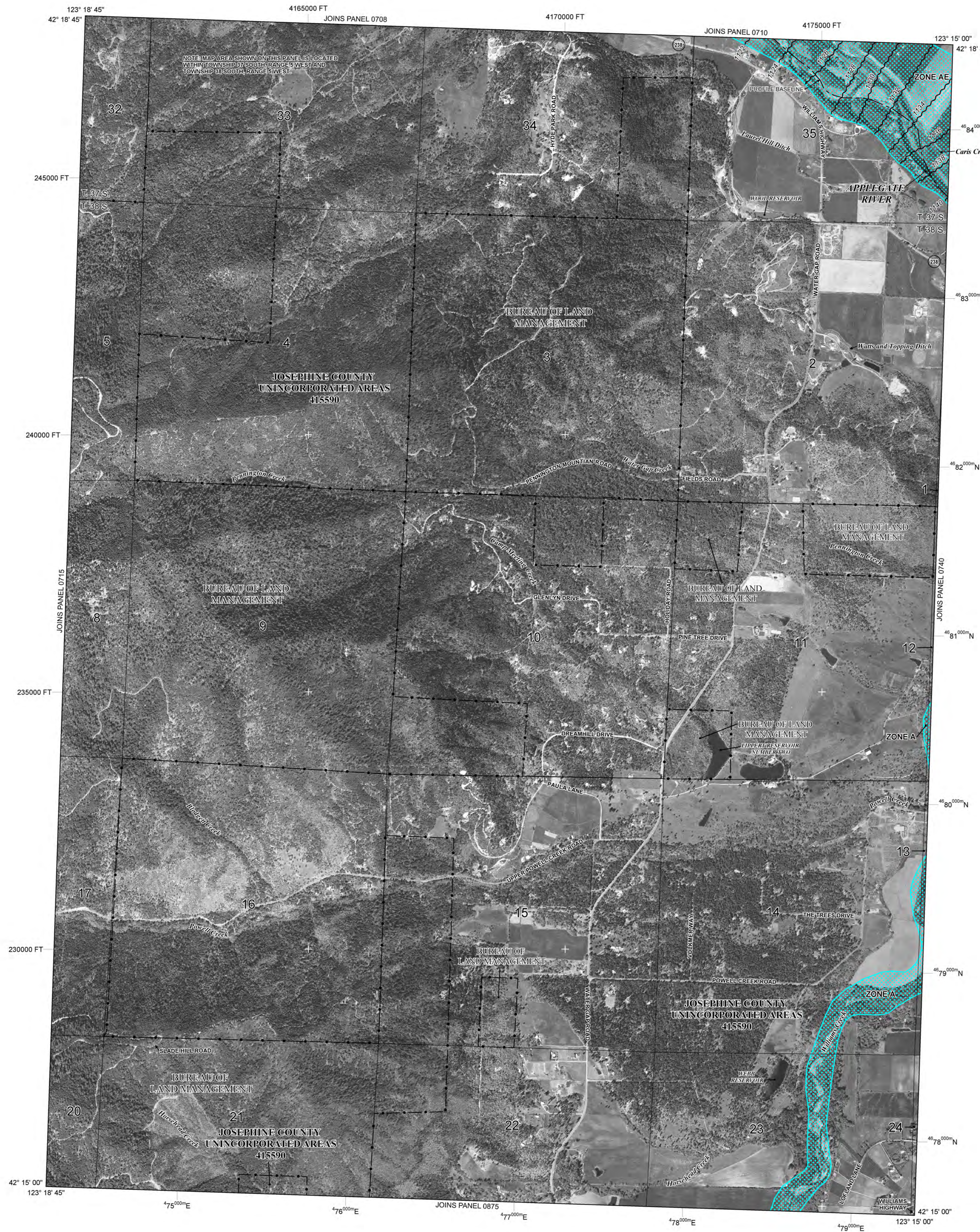
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**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
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- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*

\*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Oregon State Plane South Zone (FIPS Zone 3602), Lambert Conformal Conic projection
- 4689000m N 1000-meter Universal Transverse Mercator grid values, zone 10N
- DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile
- MAP REPOSITORIES Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP DECEMBER 3, 2009
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0720E

**FIRM**  
FLOOD INSURANCE RATE MAP  
JOSEPHINE COUNTY,  
OREGON  
AND INCORPORATED AREAS

PANEL 720 OF 1175  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0720	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER  
41033C0720E  
EFFECTIVE DATE  
DECEMBER 3, 2009  
Federal Emergency Management Agency

*Attach. 6*

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NGS Information Services  
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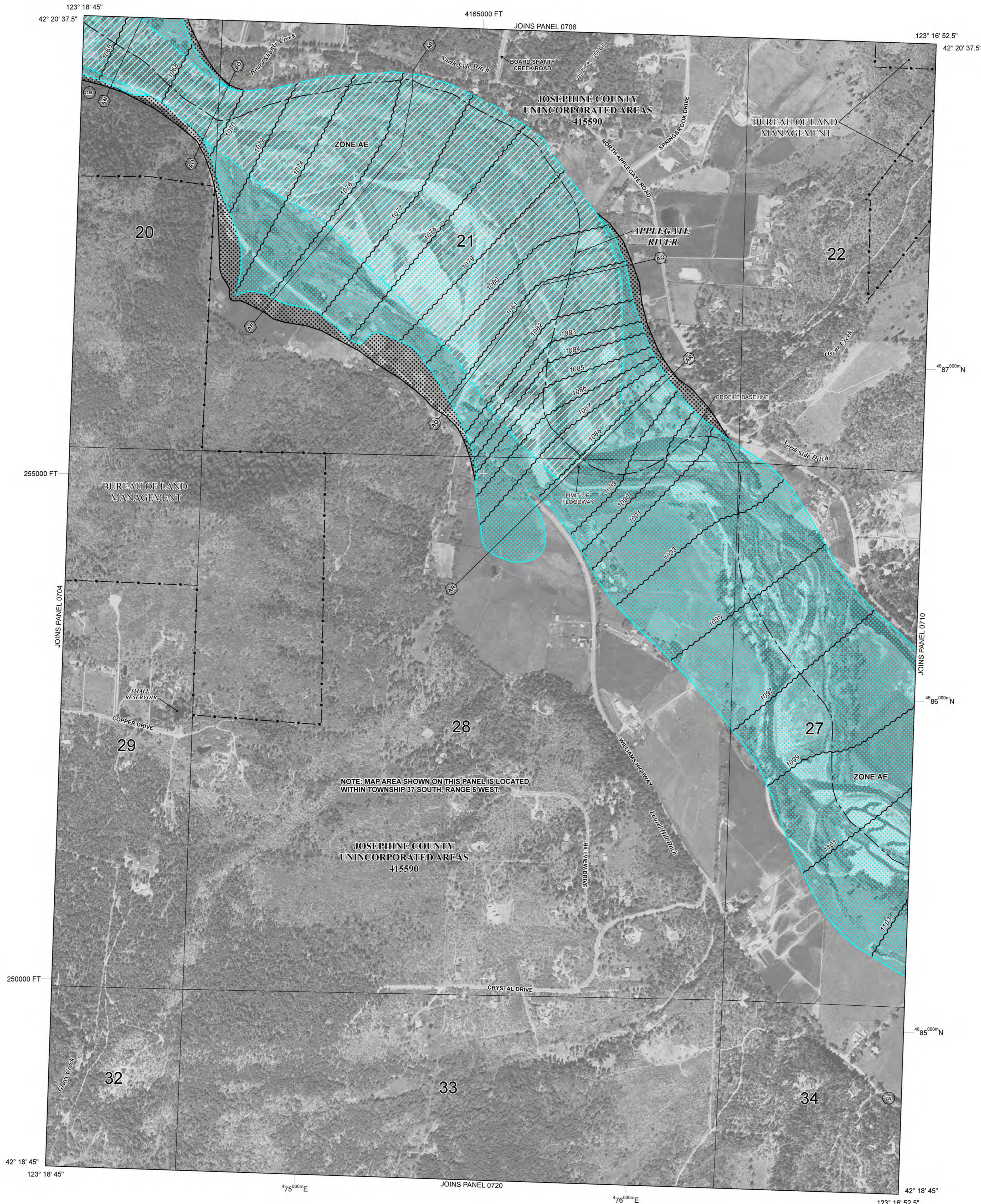
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NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 37 SOUTH, RANGE 5 WEST.

JOSEPHINE COUNTY UNINCORPORATED AREAS 415590

**LEGEND**

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- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE AV** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\* (EL 987)
- Base Flood Elevation value where uniform within zone; elevation in feet\*

\*Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere

3100000 FT 5000-foot ticks: Oregon State Plane South Zone (FIPS Zone 3602), Lambert Conformal Conic projection

890000m N 1000-meter Universal Transverse Mercator grid values, zone 10N

DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 River Mile

MAP REPOSITORIES Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP DECEMBER 3, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET  
150 0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0708E

**FIRM**

**FLOOD INSURANCE RATE MAP**

**JOSEPHINE COUNTY, OREGON AND INCORPORATED AREAS**

PANEL 708 OF 1175  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0708	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41033C0708E  
EFFECTIVE DATE DECEMBER 3, 2009  
Federal Emergency Management Agency

*Attach. 3*



# STAND UP TO FACTORY FARMS

September 8, 2021

Submitted via email

William (Wym) Matthews  
Oregon Department of Agriculture  
ODA-CAFO Program  
635 Capitol St. NE  
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Beth Moore  
Oregon Department of Environmental Quality  
Water Quality Permitting and Program Development  
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**RE: COMMENTS IN OPPOSITION TO NOBLE DAIRY'S PROPOSAL TO SUBSTANTIALLY CHANGE ITS ANIMAL WASTE MANAGEMENT PLAN IN ORDER TO EXPAND AND BECOME OREGON'S NEWEST MEGA DAIRY CAFO**

Dear Mr. Matthews and Ms. Moore:

Noble Dairy—a large, tier 1 confined animal feeding operation (CAFO) sited in a Special Flood Hazard Area (SFHA) on the banks of the Applegate River—seeks to become Oregon's newest mega dairy CAFO. Specifically, Noble Dairy proposes to substantially change its animal waste management plan (AWMP) to accommodate its plans to *nearly double* the number of cows it confines. Stand Up to Factory Farms—a coalition of animal welfare, environmental, family farm, public health, rural advocacy, and wildlife protection organizations with hundreds of thousands of members and supporters in Oregon—submits the following comments in opposition to this proposal and requests a hearing under Oregon Administrative Rule 340-045-0027.

As the recent Lost Valley Farm regulatory catastrophe illustrates, mega dairy CAFOs constitute unjustifiable risks to Oregon's environment, public health,

animal welfare, and rural communities.<sup>1</sup> Accordingly, the commenting coalition urges the Oregon Department of Agriculture (ODA) and the Oregon Department of Environmental Quality (ODEQ) (collectively “the Agencies”) to (1) deny the proposed substantial changes to Noble Dairy’s AWMP and require Noble Dairy to apply for an individual National Pollutant Discharge Elimination System (NPDES) permit that addresses and mitigates the unique environmental risks that this CAFO already presents, and (2) institute a moratorium on all new or expanding mega dairy CAFOs in Oregon.

## I. THE COMMENTING COALITION

**Stand Up to Factory Farms** is a coalition of local, state, and national organizations concerned about the harmful impacts of mega dairy CAFOs on Oregon’s family farms, communities, environment, public health, and animal welfare.<sup>2</sup>

## II. FACTUAL BACKGROUND

Noble Dairy is a large, tier 1 dairy CAFO sited in an SFHA<sup>3</sup> on the banks of the Applegate River in Josephine County, Oregon.<sup>4</sup> It proposes to substantially

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<sup>1</sup> Lost Valley Farm was a permitted mega dairy CAFO in Boardman, Oregon that spilled manure and other waste; went into business without a legal and practical source of water; resorted to the stockwatering exemption in a designated Critical Groundwater Area and extracted water from an already depleted groundwater aquifer; went bankrupt and failed to pay its suppliers for goods and services rendered; and violated its permit more than two hundred times. The state was forced to expend its limited resources to shut down this mega dairy CAFO and manage the fallout.

<sup>2</sup> Members of Stand Up to Factory Farms include Columbia Riverkeeper, Friends of the Columbia Gorge, Friends of Family Farmers, Humane Voters Oregon, Oregon Rural Action, WaterWatch of Oregon, Animal Legal Defense Fund, Center for Biological Diversity, Center for Food Safety, Food & Water Watch, and Food & Water Action. *The Coalition*, STAND UP TO FACTORY FARMS, <https://standuptofactoryfarms.org/about-us/the-coalition/> (last visited Sep. 7, 2021).

<sup>3</sup> Federal Emergency Management Agency (FEMA), National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0740E, Josephine County, Oregon and Incorporated Areas, Panel 0740E (Dec. 3, 2009) (“FIRM 1”) (Attach. 1).

<sup>4</sup> The CAFO is owned by Jerry Noble and co-operated by Larry and Sharon Noble, d.b.a. Jerry Noble. It is registered to the NPDES General Permit #01-2016 under Master Address number 63943. ODA AND ODEQ, NOTICE OF PUBLIC PARTICIPATION OPPORTUNITY, PROPOSED SUBSTANTIAL CHANGE FOR CONFINED ANIMAL FEEDING OPERATION (CAFO) IN AREA IV (Aug. 4, 2021),

change its AWMP by *nearly doubling* the number of cows it is permitted to confine.<sup>5</sup> This CAFO is already permitted to confine 1,630 cows, and it proposes to increase this number to 2,900 cows.<sup>6</sup> If the Agencies approve this proposal, Noble Dairy will become Oregon’s newest mega dairy CAFO.<sup>7</sup>

In 2019, Noble Dairy reported that it generated 748,104 cubic feet of solid manure and disposed of 12,420 cubic feet of solid manure on fields.<sup>8</sup> It reported that it generated 1,460,094 cubic feet—or **10,922,262 gallons**—of liquid manure, manure-contaminated runoff, and manure-contaminated process water.<sup>9</sup> The CAFO also reported that it disposed of 2,586,722 cubic feet—or **19,350,024 gallons**—of liquid waste on 1,412 acres of nearby fields (“disposal fields”).<sup>10</sup>

Noble Dairy failed to specify exactly how much additional manure would result from an additional 1,270 cows.<sup>11</sup> However, since Noble Dairy proposes to nearly double the current number of cows, it stands to reason that each of the above figures will also nearly double. And since it seems that this CAFO plans to continue its practice of disposing of manure and manure-contaminated runoff and process water by applying it to fields, approval of the proposed substantial changes to the AWMP will result in nearly **40,000,000 gallons** of liquid waste being applied to the disposal fields each year. Accordingly, the quantity of pollutants discharged to the environment will also nearly double, including dangerous water pollutants like nitrates and dangerous air pollutants like hydrogen sulfide. Finally, the water that this CAFO consumes—for irrigation, cleaning, drinking water for the cows, etc.—will also nearly double.

The Applegate River, a “major tributary of the Rogue River” that “drains a large portion of the eastern Siskiyou Mountains,” is an invaluable natural

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[https://www.oregon.gov/oda/programs/NaturalResources/Documents/CAFOPublicNotices/2021/NoblePublicNotice.pdf?utm\\_medium=email&utm\\_source=Govdelivery](https://www.oregon.gov/oda/programs/NaturalResources/Documents/CAFOPublicNotices/2021/NoblePublicNotice.pdf?utm_medium=email&utm_source=Govdelivery).

<sup>5</sup> NUTRIENT MANAGEMENT PLAN FOR NOBLE DAIRY, SUPPLEMENTAL DOCUMENTS, MODIFICATION OF ANIMAL NUMBERS TO CONFINED ANIMAL FEEDING OPERATION NPDES OR WPCF PERMIT REGISTRATIONS (Rev. September 2020) (“AWMP”).

<sup>6</sup> *Id.*

<sup>7</sup> Legislation that would enact a mega dairy moratorium, which was introduced this year in Oregon, defines a “mega dairy” as one that has 2,500 cows or more. S.B. 0583, 81st Leg. Assemb., 2021 Reg. Session (Or. 2021); H.B. 2924, 81st Leg. Assemb., 2021 Reg. Session (Or. 2021). These comments adopt that definition.

<sup>8</sup> AWMP, *supra* note 5, at 2.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> This failure violates ORA 340-051-0015(e), which requires that new, modified, or expanded facilities and operations submit to the Agencies the “estimated volume of wastes to be collected and disposed of[.]”



resource.<sup>12</sup> The river and its tributaries are home to many species of fish, including steelhead, rainbow, cutthroat, and brook trout,<sup>13</sup> and the river's drainage is home to the endangered Siskiyou Mountains salamander.<sup>14</sup> The river and its shoreline are used for many forms of recreation, including camping, swimming, and hiking.<sup>15</sup>

### III. COMMENTS

The commenting coalition urges the Agencies to deny the proposed substantial changes to Noble Dairy's AWMP, which substantial evidence shows is already noncompliant with NPDES General Permit #01-2016.<sup>16</sup> Concurrently, the commenting coalition urges the Agencies to require Noble Dairy to apply for an individual NPDES permit.<sup>17</sup> Given the circumstances, the proposed substantial changes to the AWMP would exacerbate the already significant risk that this CAFO poses to the environment. Accordingly, to approve the substantial changes to the AWMP would be arbitrary, capricious, and otherwise contrary to law.

The commenting coalition further urges the Agencies to institute a moratorium on all new or expanding mega dairy CAFOs in Oregon. Substantial evidence shows that such CAFOs constitute unjustifiable risks to the environment, public health, environmental justice communities, animal welfare, and rural communities.

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<sup>12</sup> *Applegate River*, U.S. FOREST SERV., <https://www.fs.usda.gov/recarea/roque-siskiyou/recarea/?recid=74287> (last visited Sep. 7, 2021).

<sup>13</sup> *Id.*

<sup>14</sup> DAVID CLAYTON, DEANNA OLSON, & RICHARD NAUMAN, U.S. FOREST SERV., CONSERVATION ASSESSMENT FOR THE SISKIYOU MOUNTAINS SALAMANDER (*PLETHODON STORMI*) 8–9 (2005), <https://www.blm.gov/or/plans/surveyandmanage/files/ca-ha-plethodon-stormi-2005-09-01.pdf>.

<sup>15</sup> *Applegate River*, *supra* note 12.

<sup>16</sup> ODA & DEQ, OREGON CONFINED ANIMAL FEEDING OPERATION NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT NUMBER 01-2016 (Apr. 20, 2016) (“General Permit”).

<sup>17</sup> Any interested person may petition the Agencies to require an individual NPDES permit. Or. Admin. R. 340-045-0033(10)(c). Grounds for requiring an individual NPDES permit include that the activity significantly contributes pollution or “creates other environmental problems,” that the permittee is out of compliance with the General Permit or any applicable law, or “[a]ny other relevant factors.” Or. Admin. R. 340-045-0033(10)(c)(A), (B), and (F).

**A. The Agencies should deny the proposed substantial changes to Noble Dairy’s AWMP and require Noble Dairy to apply for an individual NPDES permit.**

Noble Dairy is required to ensure that its AWMP complies with the terms and conditions of the General Permit.<sup>18</sup> The AWMP already fails to comply with these terms and conditions, and not without consequence—the CAFO’s location in an SFHA on the Applegate River makes it a ticking environmental time bomb. The proposed substantial changes to the AWMP would exacerbate existing risk to the environment by nearly doubling the quantity of manure and other pollutants that the CAFO produces, making any flood-related discharges to the Applegate River even more catastrophic.<sup>19</sup> The Agencies should deny the proposed substantial changes to the AWMP and require Noble Dairy to apply for an individual NPDES permit that addresses and mitigates the unique environmental risks that this CAFO already presents.

The General Permit provides that AWMPs must, among other things:

- “[E]nsure collection, handling, and storage of contaminated stormwater runoff from the production area, manure, litter, and process wastewater in compliance with the requirements of [Section 2],”<sup>20</sup> including the requirement that “permit registrant[s] must *site*, design, construct, *operate*, and maintain all waste storage facilities to contain all manure, litter, process wastewater, and stormwater runoff and direct precipitation from a 25-year, 24-hour rainfall event[.]”<sup>21</sup>
- “[P]revent direct contact of confined animals with surface water,”<sup>22</sup> which means “any situation where animals in the production area have free access and are allowed to loiter or drop waste in surface water.”<sup>23</sup>

Noble Dairy is not in compliance with these terms and conditions—nor can it be so long as it is sited in an SFHA on the banks of the Applegate River, as depicted

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<sup>18</sup> General Permit, *supra* note 16, at S3.C.1.

<sup>19</sup> See Or. Admin. R. 603-074-0005 (“In interpreting and applying these rules [the Agencies] may consider . . . the potential for a particular confined animal feeding operation to cause a discharge of animal wastes into the waters of the state.”).

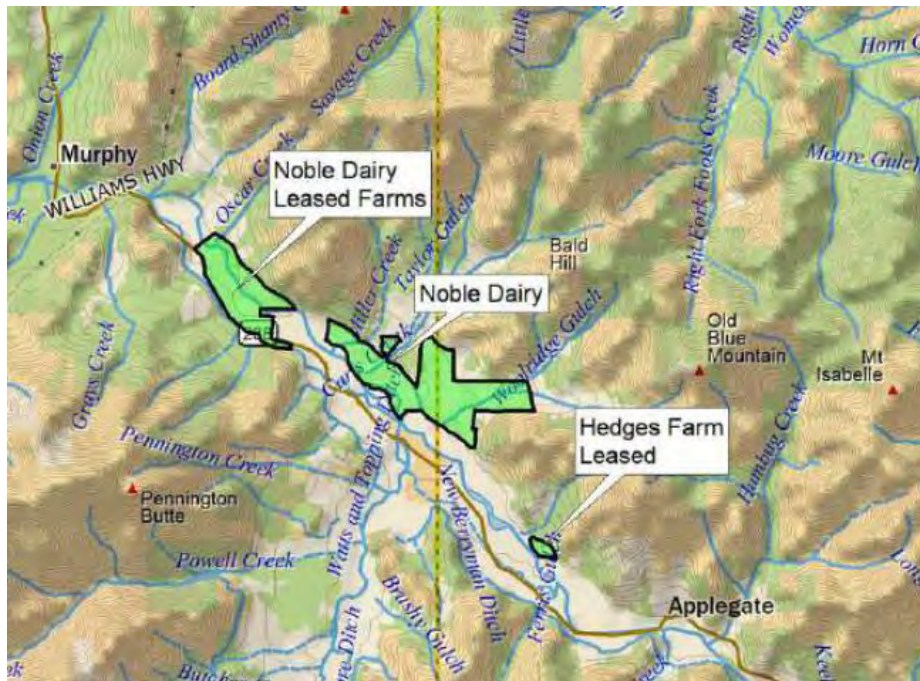
<sup>20</sup> General Permit, *supra* note 16, at S3.C.2.(a).

<sup>21</sup> *Id.* at S2.E.2 (emphasis added).

<sup>22</sup> *Id.* at S3.C.2.(e).

<sup>23</sup> *Id.* at S2.D.

below.<sup>24</sup> One of the disposal field areas, the “Noble Dairy Leased Farms,” even *straddles* the Applegate River.<sup>25</sup>



Noble Dairy’s production area is a stone’s throw from the Applegate River. This area includes cow confinement buildings and two large liquid manure impoundments (“Big Pond 1” and “Big Pond 2”), as depicted below.<sup>26</sup> The “Home 2” and “Home 3” disposal fields, which Noble Dairy uses as “vegetated treatment areas,” are all that lies between the production area and the Applegate River.<sup>27</sup>

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<sup>24</sup> AWMP, *supra* note 5, at 9.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 22.

<sup>27</sup> *Id.* at 21; 23 (describing and depicting “Home 2” and “Home 3” fields).



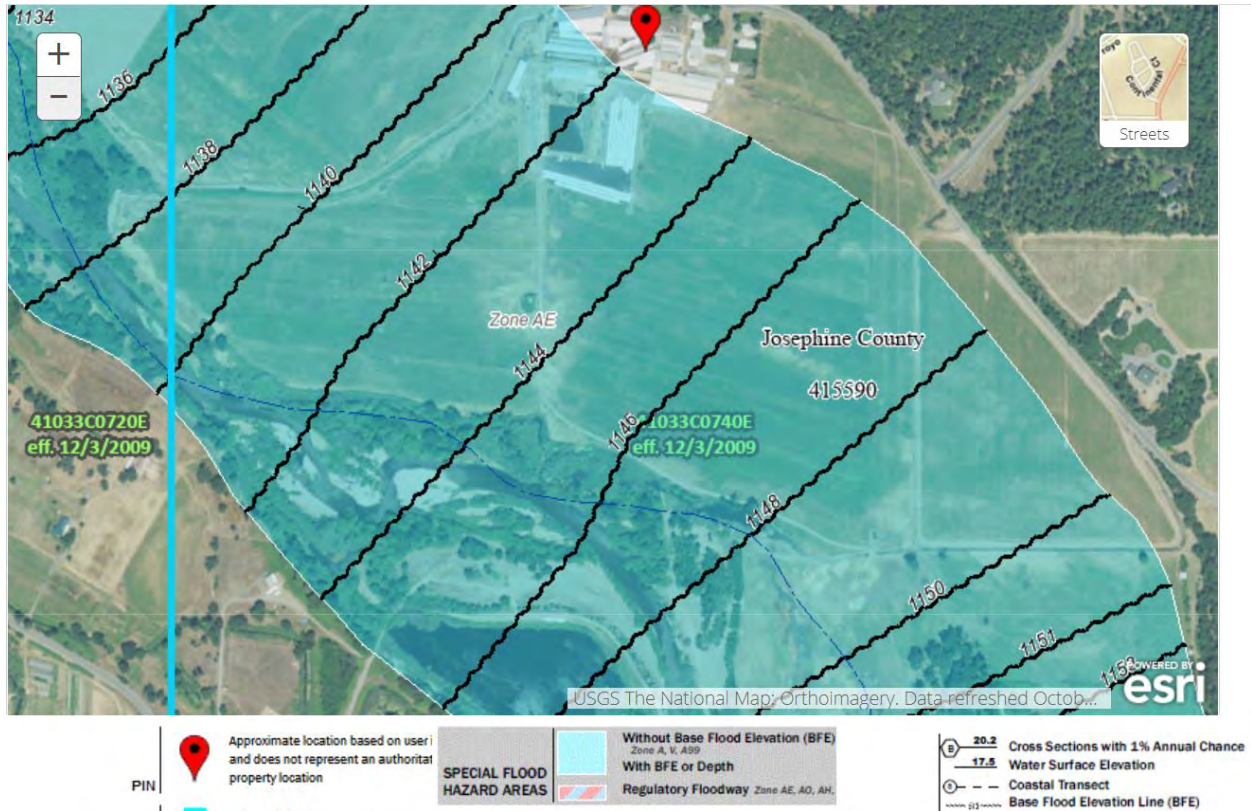
As depicted below,<sup>28</sup> “Big Pond 1” is approximately 1,370 feet from the Applegate River and “Big Pond 2” is approximately 4,321 feet from the Applegate River. In addition, Carris Creek also runs right alongside the western side of the production area, with “Big Pond 1” lying approximately 258 feet away from the creek and “Big Pond 2” lying approximately 636 feet away.

<sup>28</sup> GOOGLE MAPS, <https://www.google.com/maps/place/Noble+Dairy/@42.3059917,-123.2465208,972m/data=!3m1!1e3!4m5!3m4!1s0x0:0x8d9a9346d87d611!8m2!3d42.305107!4d-123.2434631> (last visited Sep. 7, 2021).





As depicted below, much of the production area (as well as disposal fields “Home 2” and “Home 3”) lies beneath a SFHA, as designated by the Federal Emergency Management Agency (FEMA).<sup>29</sup> This includes many of the buildings where cows are confined. It also includes “Big Pond 1,” which contains 2,147,530 gallons of liquid manure, and “Big Pond 2,” which contains 2,312,939 gallons of liquid manure.<sup>30</sup> Together, these “ponds” alone hold nearly **4.5 million gallons of liquid manure**. If these “ponds” were inundated in a flood, the environmental impact would be catastrophic.

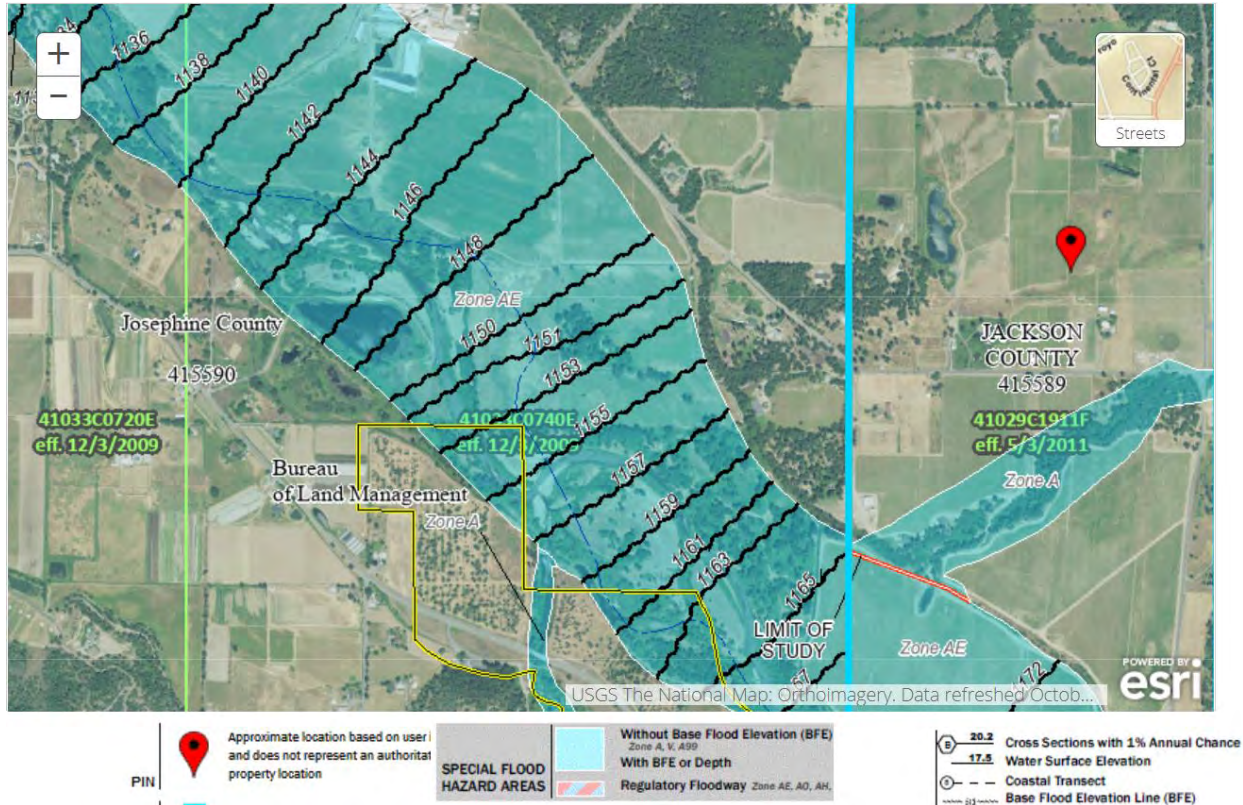


As depicted below, almost all of Noble Dairy’s disposal fields—including “Home 4,” “Mac L,” “Lynch L,” “Andreas 1(L),” “Andreas 2(L),” “Andreas 3(L),”

<sup>29</sup> FIRM 1, *supra* note 3 (Attach. 1); see *Special Flood Hazard Area (SFHA)*, FEMA, [fema.gov/glossary/special-flood-hazard-area-sfha](https://www.fema.gov/glossary/special-flood-hazard-area-sfha) (last visited Sep. 7, 2021) (defining “Special Flood Hazard Area” as “[a]n area having special flood, mudflow or flood-related erosion hazards and shown on . . . a Flood Insurance Rate Map (FIRM) Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V” (emphasis added)); FEMA, UNIT 3: NFIP FLOOD STUDIES AND MAPS 3-5 (explaining that SFHAs have a 4% chance of being hit with a 25-year flood within one year, a 34% chance within ten years, a 56% chance within twenty years, a 71% chance within thirty years, and an 87% chance within fifty years).

<sup>30</sup> AWMP, *supra* note 5, at 9.

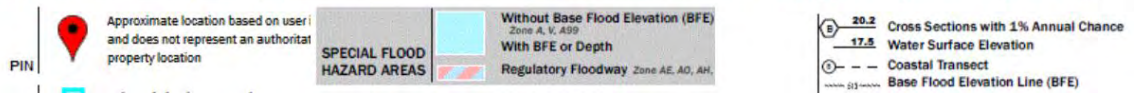
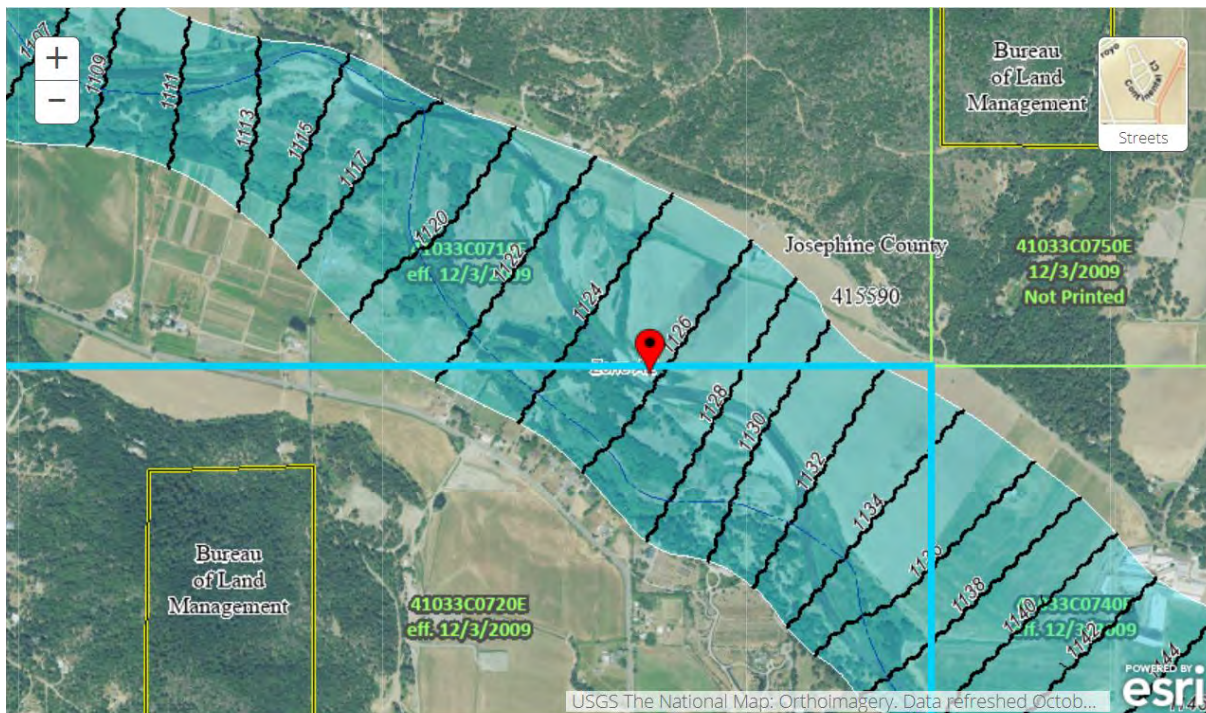
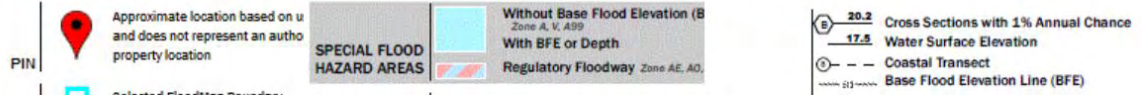
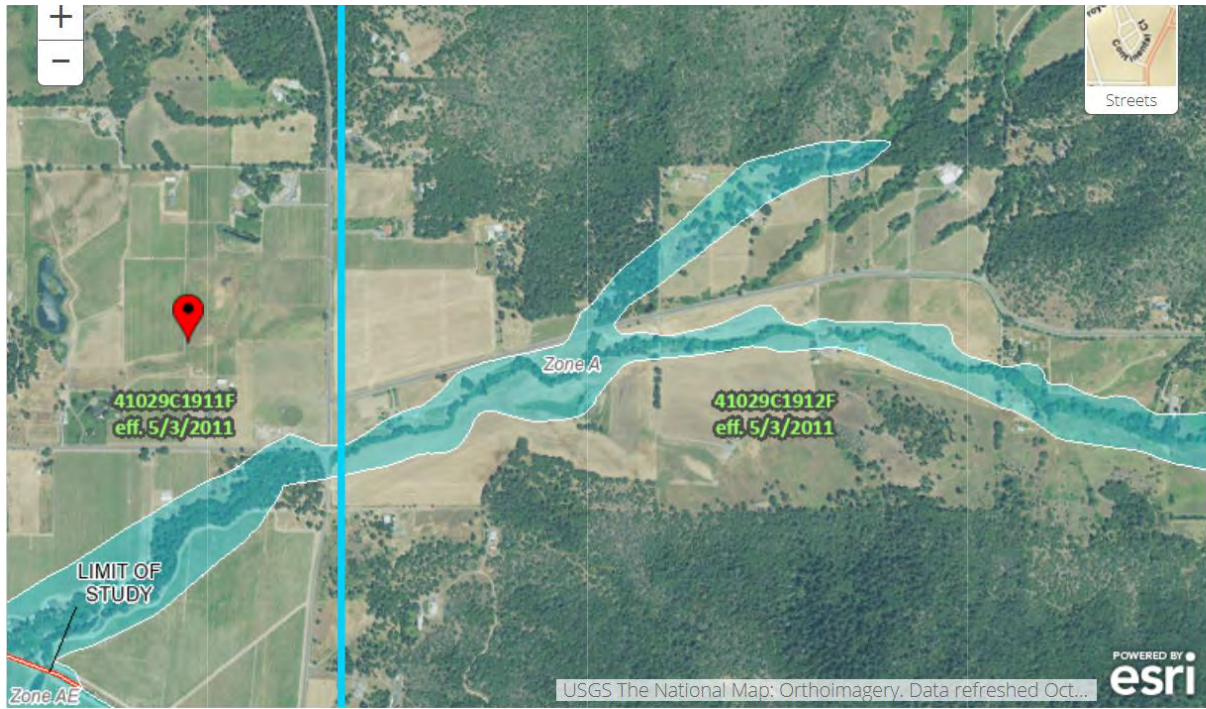
“Rice,” “Gallos 1,” “Gallos 2,” “Gallos 3,” “SorensensL,” “HydeL,” “HannaganL,” “TwinL,” and “HeisnersL”<sup>31</sup>—also lie at least partially beneath a FEMA-designated SFHA.<sup>32</sup> If these disposal fields were inundated in a flood, the environmental impact would be catastrophic.

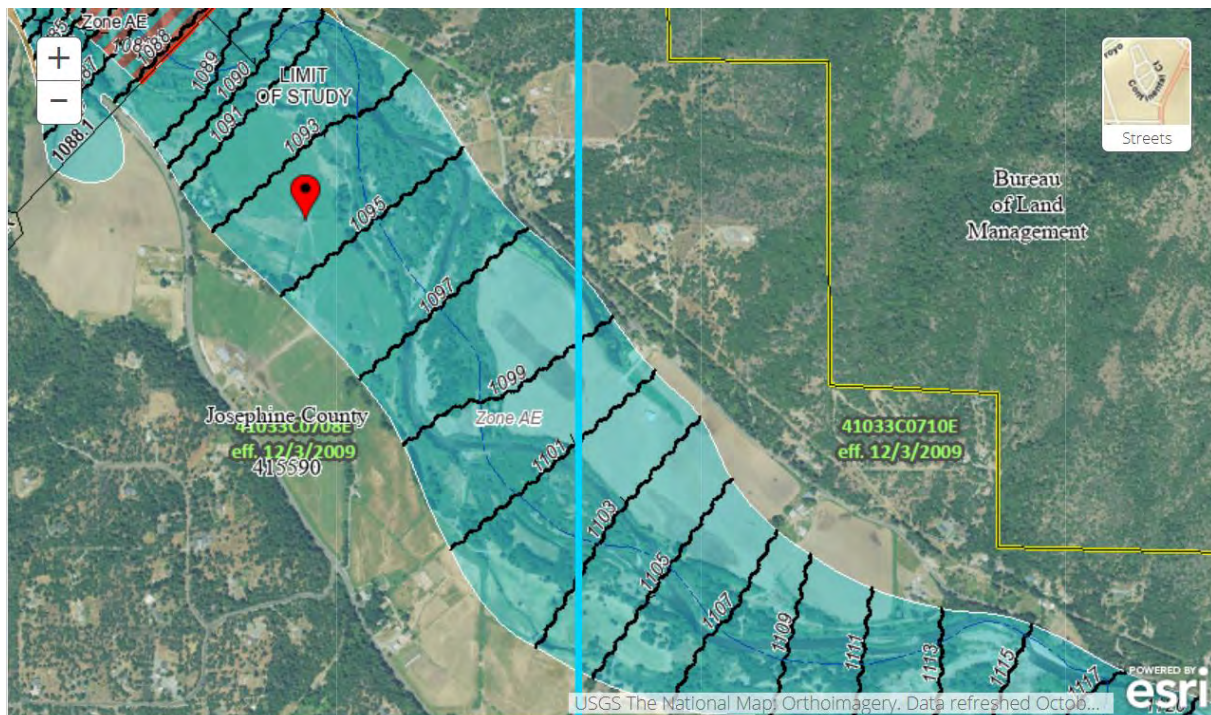
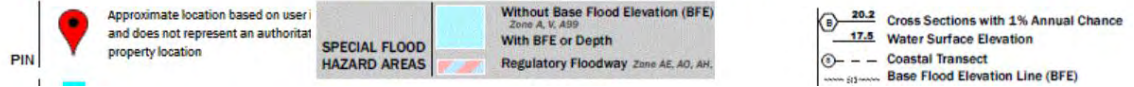
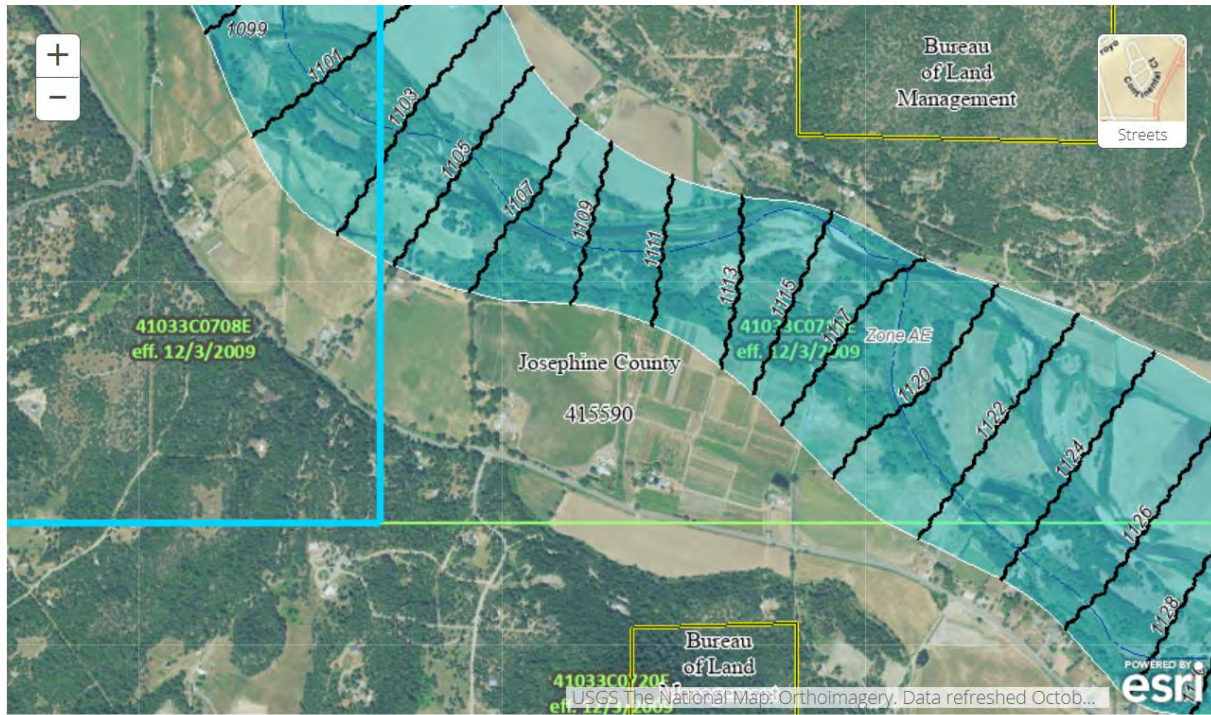


<sup>31</sup> *Id.* at 23; 24.

<sup>32</sup> FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41029C1911F, Josephine County, Oregon and Incorporated Areas, Panel 1911F (May 3, 2011) (Attach. 2); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41029C1912F, Josephine County, Oregon and Incorporated Areas, Panel 1912F (May 3, 2011) (Attach. 3); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0710E, Josephine County, Oregon and Incorporated Areas, Panel 0710E (Dec. 3, 2009) (Attach. 4); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0720E, Josephine County, Oregon and Incorporated Areas, Panel 0720E (Dec. 3, 2009) (Attach. 5); FEMA, National Flood Insurance Program, Flood Insurance Rate Map No. 41033C0708E, Josephine County, Oregon and Incorporated Areas, Panel 0708E (Dec. 3, 2009) (Attach. 6).







The evidence is clear: Noble Dairy is sited in an SFHA. As discussed above, this means that Noble Dairy has a 4% chance of being hit with a 25-year flood within one year, a 34% chance within ten years, a 56% chance within twenty years, a 71% chance within thirty years, and an 87% chance within fifty years.<sup>33</sup> And these odds may actually be even higher, as wildfires driven by climate change are increasing the risk of flooding.<sup>34</sup>

When such a flood does occur, Noble Dairy's two large liquid manure impoundments (and any other manure storage facilities located in the production area)<sup>35</sup> will be inundated by the floodwaters of the Applegate River (and potentially Carris Creek). In addition, the cows who are confined in the buildings located in the production area will come into direct contact with the floodwaters of the Applegate River—and they may even drown.<sup>36</sup>

Therefore, Noble Dairy's AWMP does not—and cannot—comply with the terms and conditions of the General Permit.<sup>37</sup> Noble Dairy has failed to site and operate its waste storage facilities to contain all manure, process wastewater, stormwater runoff, and direct precipitation from a 25-year, 24-hour rainfall event.<sup>38</sup> It has also sited the majority of its disposal fields in a SFHA. Finally, Noble Dairy has failed to site and operate its production area such that it can prevent cows from coming into direct contact with the Applegate River (and potentially Carris Creek) during a flood.<sup>39</sup> No CAFO should be sited in an SFHA in the first place, but one that is already sited there should certainly not be allowed to expand. The Agencies should deny the proposed substantial changes to Noble Dairy's AWMP and require Noble Dairy to apply for an individual NPDES permit that can address and mitigate these unique—and significant—environmental risks.

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<sup>33</sup> See Unit 3: NFIP Flood Studies and Maps, *supra* note 29, at 3-5).

<sup>34</sup> FEMA, FLOOD AFTER FIRE FACT SHEET (Jan. 2012), [https://www.ready.gov/sites/default/files/Flood\\_After\\_Fire\\_Fact\\_Sheet.pdf](https://www.ready.gov/sites/default/files/Flood_After_Fire_Fact_Sheet.pdf).

<sup>35</sup> See AWMP, *supra* note 5, at 3.

<sup>36</sup> The cows will not be saved and will still come into direct contact with the Applegate River even if they are out to pasture when a flood occurs—most of the disposal fields that are also used as pasture are also in SFHAs. AWMP, *supra* note 5, at 51.

<sup>37</sup> See *supra* notes 20–23.

<sup>38</sup> See *supra* notes 20–21.

<sup>39</sup> See *supra* notes 22–23.

**B. The Agencies should institute a moratorium on all new or expanding mega dairy CAFOs in Oregon.**

Substantial evidence shows that mega dairy CAFOs constitute unjustifiable risks to the environment, public health, environmental justice communities, animal welfare, and rural communities. First, such CAFOs:

- Threaten Oregon’s vulnerable water supply, with some CAFOs consuming as much water as a midsized city.
- Are significant sources of water pollution, impacting groundwater and surface water resources.
- Are significant sources of air pollution—including potent greenhouse gases like methane—that fuel climate change, undercut Oregon’s efforts to improve ambient air quality, and threaten Oregon’s iconic natural resources, such as the Columbia River Gorge.

Second, CAFOs harm public health by polluting water and air resources, breeding new viruses capable of generating pandemics, and contributing to the growth of antibiotic resistance. Third, CAFOs disproportionately harm Oregon’s low-income and BIPOC communities. Fourth, CAFOs force sentient animals into intense confinement—where they are deprived of the opportunity to graze outdoors and are instead left to stand or lie all day in their own manure—without regard for their interests or well-being. Finally, CAFOs are putting Oregon’s remaining small and mid-sized family farms out of business.

**1. Environmental Effects**

***a. Water Consumption***

CAFOs consume “a massive amount of water” for various operational purposes, such as flushing manure from barns, watering animals, and irrigating the crops upon which they rely for manure management.<sup>40</sup> “Because of this demand for water, CAFOs tend to seek sites above major aquifers,” and “water is essentially treated as a free good after it is removed from the ground.”<sup>41</sup> Lost Valley Farm used an estimated ten million gallons of water each day—in part by exploiting a permit loophole for “stockwatering” that allowed it to extract groundwater from an aquifer that had been closed to new withdrawals for decades—despite the fact that it

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<sup>40</sup> See WILLIAM J. WEIDA, CONCENTRATED ANIMAL FEEDING OPERATIONS AND THE ECONOMICS OF EFFICIENCY 22 (Mar. 19, 2000), <https://www.sraproject.org/wp-content/uploads/2017/10/cafosandtheeconomicsofefficiency.pdf>.

<sup>41</sup> *Id.* at 22.

reached only one third of its permitted size.<sup>42</sup> A water plan for the proposed Easterday mega dairy CAFO shows it would use approximately twenty million gallons of water per day.<sup>43</sup>

Oregon's rivers suffer from low flows and warming water, and its groundwater and surface water resources are overallocated.<sup>44</sup> There are twenty-two designated groundwater administrative areas in Oregon, including critical groundwater areas, groundwater limited/classified areas, and those areas withdrawn from appropriation.<sup>45</sup> CAFOs further burden these critical resources at the expense of Oregon's other water users, including homes, family farms, and wildlife.

### ***b. Water Pollution***

“Underlying all of the environmental problems associated with CAFOs is the fact that too much manure accumulates in restricted areas.”<sup>46</sup> For example, a single dairy CAFO with one thousand cows produces as much waste as a city of 164,500 humans.<sup>47</sup> And larger CAFOs, such as the proposed Easterday mega dairy CAFO—

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<sup>42</sup> This estimate includes water used for irrigation and is based on water rights, number of acres, and applications for additional water rights. Without considering water used for irrigation, Lost Valley Farms used approximately one million gallons of water each day. Tracy Loew, *State officials let mega-dairy use loophole to tap endangered Oregon aquifer*, STATESMAN JOURNAL (Mar. 22, 2018), <https://www.statesmanjournal.com/story/tech/science/environment/2018/03/22/lost-valley-mega-dairy-oregon-used-loophole-tap-aquifer-allowed-state-officials/426738002/>.

<sup>43</sup> Water Description Use, Easterday Farms Dairy (Sep. 2020) (water plan produced by Oregon Water Resources Department in response to public records request) (Attach. 7).

<sup>44</sup> Nicole Montesano, *Agriculture use strains limited water resources*, YAMHILL VALLEY NEWS REGISTER (Aug. 21, 2015), <https://newsregister.com/drying-times-agriculture-strains-water-resources>.

<sup>45</sup> *Groundwater Administrative Areas / Critical Groundwater Areas*, OREGON.GOV, <https://www.oregon.gov/OWRD/programs/GWWL/GW/Pages/AdminAreasAndCriticalGWAreas.aspx> (last visited Sep. 7, 2021).

<sup>46</sup> EPA, *Risk Assessment Evaluation for Concentrated Animal Feeding Operations* 9 (May 2004) (finding that a dairy CAFO with one thousand cows produces the same amount of waste as a city of 164,500 humans).

<sup>47</sup> *Id.* at 2.

which seeks to confine 28,300 cows on the site of Lost Valley Farm<sup>48</sup>—would produce approximately seven times the waste of Portland, Oregon.<sup>49</sup>

Unlike cities, however, CAFOs typically rely on “traditional” manure management methods to store and dispose of manure, which “are not adequate to contend with the large volumes present at CAFOs.”<sup>50</sup> The “age-old practice” of storing raw manure in holding lagoons and disposing of it by land application pollutes groundwater and surface water resources<sup>51</sup> via sprayfield runoff and lagoons that leak, seep, and catastrophically breach.<sup>52</sup>

Manure contaminants include nitrates—which threaten aquatic species—<sup>53</sup> and pathogens,<sup>54</sup> as well as ammonium, phosphate, dissolved solids, metals and metalloids, pharmaceutical chemicals, and natural and synthetic hormones.<sup>55</sup> Pathogens are parasites, bacteria, and viruses capable of causing disease or infection in animals or humans, and there are 150 different pathogens in manure capable of affecting human health.<sup>56</sup> Just six of these pathogens—*Campylobacter*, *Salmonella*, *Listeria*, *E. coli 0157:H7*, *Cryptosporidium*, and *Giardia*—account for 90% of food- and waterborne diseases.<sup>57</sup> Metals and metalloids include copper, zinc,

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<sup>48</sup> George Plaven, *Groups oppose permit for Easterday Farms Dairy*, EAST OREGONIAN (Nov. 22, 2019), [https://www.eastoregonian.com/news/local/groups-oppose-permit-for-easterday-farms-dairy/article\\_68bbe86b-e1bf-5e0b-a4c1-36dd53b6d3fe.html](https://www.eastoregonian.com/news/local/groups-oppose-permit-for-easterday-farms-dairy/article_68bbe86b-e1bf-5e0b-a4c1-36dd53b6d3fe.html).

<sup>49</sup> See World Population Review, *Portland, Oregon Population 2020*, <http://worldpopulationreview.com/us-cities/portland-population/> (Oct. 29, 2019) (stating that Portland’s population is 653,115).

<sup>50</sup> EPA, *supra* note 46, at 2.

<sup>51</sup> See *id.* at 1, 2.

<sup>52</sup> See *id.* at 1; Steve Wing et al., *Environmental Injustice in North Carolina’s Hog Industry*, 108 ENVTL. HEALTH PERSP. 225, 225 (2000).

<sup>53</sup> See Elizabeth Royte, *The Simple River-Cleaning Tactics That Big Farms Ignore*, NATIONAL GEOGRAPHIC (Dec. 7, 2017), <https://www.nationalgeographic.com/news/2017/12/iowa-agriculture-runoff-water-pollution-environment/>.

<sup>54</sup> Wing, *supra* note 52, at 225.

<sup>55</sup> STEPHEN R. HUTCHINS ET AL., CASE STUDIES ON THE IMPACT OF CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs) ON GROUND WATER QUALITY 7–8 (2012).

<sup>56</sup> CARRIE HRIBAR, NAT’L ASSOC. OF LOCAL BDS. OF HEALTH, UNDERSTANDING CONCENTRATED ANIMAL FEEDING OPERATIONS AND THEIR IMPACTS ON COMMUNITIES 8–9 (2010), [https://www.cdc.gov/nceh/ehs/docs/understanding\\_cafos\\_nalboh.pdf](https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf).

<sup>57</sup> D. LEE MILLER & GREGORY MUREN, CAFOs: WHAT WE DON’T KNOW IS HURTING US 8, <https://www.nrdc.org/sites/default/files/cafes-dont-know-hurting-us-report.pdf> (2019) (citing BROWN, VENCE & ASSOCIATES, TASK 2 REPORT: TITLE 27 EFFECTIVENESS TO PROTECT GROUNDWATER QUALITY 22, <https://www.waterboards.org>).

arsenic, nickel, and selenium.<sup>58</sup> Pharmaceutical chemicals include antibiotics, and hormones include estrogen.<sup>59</sup>

Despite the unjustifiable risks that CAFOs present to water quality, they are legion in Oregon. As a result, Oregon's groundwater and surface water resources—including drinking water sources—are polluted from CAFOs. Testing conducted in the 1990s found nearly a third (30%) of groundwater samples from monitoring wells exceeded the state trigger level.<sup>60</sup> Samples from areas dominated by CAFOs and agricultural fields where CAFO waste is applied were showing nitrate levels that reached and exceeded 70 mg/L<sup>61</sup>—seven times the 10 mg/L MCL for nitrate.<sup>62</sup> A 1996 study showed that 23% of the surveyed population were drinking private well water with nitrate concentrations over the 10 mg/L MCL.<sup>63</sup> Of the households with nitrate levels over the MCL, 72% were not taking measures to effectively remove the nitrates before human consumption.<sup>64</sup>

More recent figures suggest that the problem has only worsened. The Lower Umatilla Basin Ground Water Management Area Committee (LUBGWMA Committee) compiled the results of well sampling conducted in the region between 2015 and 2016 from a data set of 255 wells, and concluded that nearly half (48%) exceeded the 10 mg/L drinking water standard and nearly two thirds (60%) exceeded the 7 mg/L state trigger level.<sup>65</sup> In a separate survey examining just private domestic wells, the Committee found that 42% of the region's domestic wells contained nitrate levels exceeding the safe drinking water standard.<sup>66</sup>

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ca.gov/rwqcb5/water\_issues/confined\_animal\_facilities/library/bva\_final\_task2\_rpt\_ess\_ctns1\_6.pdf (last visited Sep. 7, 2021)).

<sup>58</sup> Hutchins et al., *supra* note 55, at 9.

<sup>59</sup> *Id.* at 9–13.

<sup>60</sup> GERALD H. GRONDIN ET AL., HYDROGEOLOGY, GROUNDWATER CHEMISTRY AND LAND USES IN THE LOWER UMATILLA BASIN GROUNDWATER MANAGEMENT AREA ES-1 & ES-5. At the time of these initial tests, the Oregon trigger level was set equal to EPA's MCL of 10 mg/L but has since been adjusted to the more protective standard of 7 mg/L. *Id.* at ES-2.

<sup>61</sup> *Id.* at ES-6–ES-7.

<sup>62</sup> 40 C.F.R. § 141.11(d).

<sup>63</sup> Thomas J. Mitchell & Anna K. Harding, *Who Is Drinking Nitrate in their Well Water? A Study Conducted in Rural Northeastern Oregon*, J. ENVTL. HEALTH 14, 14 (1996).

<sup>64</sup> *Id.* at 18.

<sup>65</sup> LOWER UMATILLA BASIN GROUNDWATER MANAGEMENT COMMITTEE, SECOND LOWER UMATILLA BASIN GROUNDWATER MANAGEMENT AREA LOCAL ACTION PLAN 34–5 (Jan. 9, 2019), <https://lubgwma.org/wp-content/uploads/2020/02/Second-Action-Plan-Draft-For-Public-Comment.pdf>.

<sup>66</sup> *Id.* at 73.

### **c. Air Pollution and Climate Change**

As the Oregon Dairy Air Quality Task Force has recognized, CAFOs produce a plethora of dangerous air emissions, including ammonia, nitrous oxide, nitrogen oxides, methane, volatile organic compounds, hydrogen sulfide, particulate matter (PM), and methanol.<sup>67</sup> These emissions diminish ambient air quality<sup>68</sup> and generate regional haze, which harms important natural resources of the state like the iconic Columbia River Gorge.<sup>69</sup> These emissions also spur climate change.<sup>70</sup>

A single CAFO is capable of emitting millions of pounds of ammonia each year.<sup>71</sup> CAFOs also produce nearly 75% of all ammonia air pollution in the United States.<sup>72</sup> Ammonia emissions are particularly high for CAFOs that rely on land application for manure management, which volatilizes the ammonia in the manure and further increases emissions.<sup>73</sup>

## **2. Public Health Effects**

### **a. Health Effects of Drinking Water Contaminated by CAFOs**

Millions of people—including Oregonians—who live in CAFO-occupied communities are forced to rely on drinking water that has been “contaminated by

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<sup>67</sup> See OR. DAIRY AIR QUALITY TASK FORCE, FINAL REPORT TO THE DEP’T OF ENVIRONMENTAL QUALITY & DEP’T OF AG. 6 (July 1, 2008), <http://library.state.or.us/repository/20;12/201204101013082/>.

<sup>68</sup> Hribar, *supra* note 56, at 7.

<sup>69</sup> MARK GREEN ET AL., THE COLUMBIA RIVER GORGE AIR QUALITY AND VISIBILITY STUDY 21 (2008) (results of study concluding that CAFO emissions are a significant source of haze in the Gorge).

<sup>70</sup> See, e.g., R.M. Duren et al., *California’s methane super-emitters*, 575 NATURE 180 (Nov. 7, 2019) (results of a study finding that California dairy CAFOs generate 26% of California’s point-source methane emissions—more than the oil and gas sector); see also Xun Liao et al., *Large-scale regionalised LCA shows that plant-based fat spreads have a lower climate, land occupation and water scarcity impact than dairy butter*, INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT (2020) (results of study finding that dairy butter is 3.5 times more damaging to the environment than alternatives).

<sup>71</sup> Michele M. Merkel, N.Y. State Bar Association presentation at Albany Law School: The Use of CERCLA to Address Agricultural Pollution 1 (Sept. 15, 2006), [http://www.environmentalintegrity.org/pdf/publications/The\\_Use\\_Cercla.pdf](http://www.environmentalintegrity.org/pdf/publications/The_Use_Cercla.pdf).

<sup>72</sup> *CAFOs Ordered to Report Hazardous Pollution*, WATERKEEPER ALLIANCE (Apr. 11, 2017), <http://waterkeeper.org/cafos-ordered-to-report-hazardous-pollution/>.

<sup>73</sup> Hribar, *supra* note 56, at 5.



dangerous nitrates and coliform bacteria” from CAFOs.<sup>74</sup> Public water systems in such communities often have nitrate and coliform levels that exceed federal contaminant limits set by the Safe Drinking Water Act.<sup>75</sup>

The health impacts of drinking contaminated water are serious, particularly for those who have weakened immune systems.<sup>76</sup> Symptoms of illnesses caused by contaminated water include “nausea, vomiting, fever, diarrhea, muscle pain, death,” and kidney failure.<sup>77</sup> People at high risk of illness or death constitute approximately 20% of the population, and they include elders, infants, children, and those who are pregnant, HIV positive, on chemotherapy, or are otherwise immunosuppressed.<sup>78</sup>

### ***b. Health Effects of Breathing Air Polluted by CAFOs***

CAFO emissions are so potent that it can be dangerous even to approach a waste lagoon—particularly in hot summer months.<sup>79</sup> “The oxygen-deficient, toxic, and/or explosive atmosphere which can develop in a manure pit has claimed many lives.”<sup>80</sup> There are multiple incidents of workers approaching lagoons to make repairs and succumbing to the emissions, including one recent incident that claimed the lives of three brothers in Minnesota.<sup>81</sup> Some workers died from hydrogen sulfide poisoning, while others asphyxiated in the oxygen-starved air.<sup>82</sup> Others died after collapsing during rescue attempts.<sup>83</sup>

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<sup>74</sup> Miller & Muren, *supra* note 57 (citing Jackie Wang, Nicole Tyau, & Chelsea Rae Ybanez, *Farming Activity Contaminates Water Despite Best Practices*, THE CALIFORNIAN (Aug. 15, 2017), <https://www.thecalifornian.com/story/news/2017/08/15/water-near-farms-often-contaminated-nitrates-coliform-bacteria/571000001/>); *see supra* section III.B.1.b.

<sup>75</sup> Miller & Muren, *supra* note 57 (citing Wang et al., *supra* note 74; *Drinking Water Contaminants—Standards and Regulations*, EPA, <https://www.epa.gov/dwstandardsregulations>).

<sup>76</sup> Hribar, *supra* note 56, at 9.

<sup>77</sup> *Id.* at 10.

<sup>78</sup> *Id.* at 9.

<sup>79</sup> ROBBIN MARKS, CESSPOOLS OF SHAME: HOW FACTORY FARM LAGOONS AND SPRAYFIELDS THREATEN ENVIRONMENTAL AND PUBLIC HEALTH 1, 26 (July 2001), <https://www.nrdc.org/sites/default/files/cesspools.pdf>.

<sup>80</sup> NIOSH Warns: *Manure Pits Continue to Claim Lives*, CENTERS FOR DISEASE CONTROL AND PREVENTION (July 6, 1993), <https://www.cdc.gov/niosh/updates/93-114.html>.

<sup>81</sup> Graeme Massie, *Three brothers killed by manure pit fumes on family farm*, THE INDEPENDENT (Aug. 12, 2021), <https://www.independent.co.uk/news/world/americas/manure-pit-fumes-kill-brothers-b1901689.html>.

<sup>82</sup> Marks, *supra* note 79, at 19.

<sup>83</sup> *See id.* at 26.

But it is not necessary to be near a lagoon to suffer health effects from the emissions. Studies show that people in CAFO-occupied communities suffer disproportionate levels tension, anger, confusion, fatigue, depression, upper respiratory, and gastrointestinal ailments than neighbors of other types of farms and non-livestock areas.”<sup>84</sup> Ammonia is a “strong respiratory irritant” that causes chemical burns to the respiratory tract, skin, and eyes.<sup>85</sup> It also causes severe coughing and chronic lung disease.<sup>86</sup> Hydrogen sulfide is acutely dangerous, causing “inflammation of the moist membranes” in the eyes and respiratory tract as well as olfactory neuron loss, pulmonary edema, and even death.<sup>87</sup> Particulate matter causes “chronic bronchitis, chronic respiratory symptoms, declines in lung function, [and] organic dust toxic syndrome.”<sup>88</sup>

### c. *Novel Viruses*

In addition to pathogen-driven illnesses, CAFOs also breed new viruses capable of generating pandemics. When the U.S. Centers for Disease Control and Prevention (CDC) sequenced the DNA of the swine flu that killed thousands of Americans in 2009, they traced its origin to a single North Carolina pig CAFO.<sup>89</sup> CDC estimates that the 2009 swine flu pandemic sickened 60.8 million Americans, hospitalized 274,304, and killed 12,469, including more than a thousand children.<sup>90</sup> Though both COVID-19 and SARS likely originated in live animal markets, they could have originated in CAFOs due to their similar conditions—and the next pandemic very well may.<sup>91</sup>

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<sup>84</sup> Hribar, *supra* note 56, at 5; see Sarah C. Wilson, Comment, *Hogwash! Why Industrial Animal Agriculture is Not Beyond the Scope of Clean Air Act Regulation*, 24 PACE ENVTL. L. REV. 439, 441, 445 n.45 (2007).

<sup>85</sup> CAFO SUBCOMM. OF THE MICH. DEP’T OF ENVTL. QUALITY TOXICS STEERING GRP., CONCENTRATED ANIMAL FEEDLOT OPERATIONS (CAFOS) CHEMICALS ASSOCIATED WITH AIR EMISSIONS 4 (May 10, 2006)

<sup>86</sup> Hribar, *supra* note 56, at 6.

<sup>87</sup> *Id.*; CAFO Subcomm., *supra* note 85, at 4.

<sup>88</sup> Hribar, *supra* note 56, at 6.

<sup>89</sup> Gavin J. D. Smith, et al., *Origins and Evolutionary Genomics of the 2009 Swine-origin H1N1 Influenza of Epidemic*, 459 NATURE 1122 (2009); Bernice Wuethrich, *Chasing the Fickle Swine Flu*, 299 SCIENCE 1502 (2003).

<sup>90</sup> Sundar S. Shrestha et al., *Estimating the Burden of 2009 Pandemic Influenza of (H1N1) in the United States (April 2009–April 2010)*, 52 CLINICAL INFECTIOUS DISEASES S75–82 (2011).

<sup>91</sup> ANIMAL LEGAL DEFENSE FUND, COVID-19 AND ANIMALS: RETHINKING OUR RELATIONSHIP WITH ANIMALS TO REDUCE THE LIKELIHOOD OF THE NEXT GLOBAL PANDEMIC 9, (June 2020), <https://aldf.org/wp-content/uploads/2020/06/White-Paper-COVID-19-and-Animals.pdf> (“A variety of factors contributed to the development and spread of COVID-19 and aggravate humanity’s risk from further zoonotic

#### *d. Antibiotic Resistance*

Finally, there are often antibiotics in CAFO animal feed.<sup>92</sup> Seventy percent of all antibiotics used in the United States are administered to farmed animals as feed additives.<sup>93</sup> CDC has recommended that the use of antibiotics in “food animals” be “phased out.”<sup>94</sup> These antibiotics are dangerous because “[t]he antibiotics often are not fully metabolized by animals[] and can be present in their manure. If manure pollutes a water supply, antibiotics can also leech into groundwater or surface water.”<sup>95</sup> The risk to public health is high because this exposure causes antibiotics to be less effective for humans while also leading to the development of antibiotic-resistant microbes.<sup>96</sup>

### **3. Environmental Injustice**

CAFOs are disproportionately sited in low-income and BIPOC communities.<sup>97</sup> This is because these communities have been denied “the political clout to

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diseases . . . . The common thread binding all risk factors, however, is our exploitation of both animals and the natural environment we share with them.”)

<sup>92</sup> Hribar, *supra* note 56, at 10; *Antibiotic Resistance Threats in the United States*, CENTERS FOR DISEASE CONTROL AND PREVENTION 11 (2013), <https://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf#page=6>; see Mary J. Gilchrist et al., *The Potential Role of Concentrated Animal Feeding Operations in Infectious Disease Epidemics and Antibiotic Resistance*, 115 ENVTL. HEALTH PERSPECTIVES 313, 313–14 (2006).

<sup>93</sup> Hribar, *supra* note 56, at 10. *But see* Gilchrist et al., *supra* note 92, at 313 (noting that estimates suggest up to 87% of all antibiotic use in the United States is for livestock animals).

<sup>94</sup> CDC, *supra* note 92, at 11.

<sup>95</sup> Hribar, *supra* note 56, at 10.

<sup>96</sup> *Id.* (citing Marc Kaufman, *Worries Rise Over Effect of Antibiotics in Animal Feed: Humans Seen Vulnerable to Drug-Resistant Germs*, WASH. POST, A01 (Mar. 17, 2000), <http://www.washingtonpost.com/wp-srv/WPcap/2000-03/17/071r-031700-idx.html> (explaining that eating the flesh of animals who have been fed antibiotics further increases one’s risk of developing antibiotic resistance)).

<sup>97</sup> See Jan. 12, 2017 EPA External Civil Rights Compliance Office Letter of Concern to N.C. Dep’t of Env’tl. Quality (describing discriminatory health and quality of life impacts from pig and poultry CAFOs), [https://www.epa.gov/sites/production/files/2018-05/documents/letter\\_of\\_concern\\_to\\_william\\_g\\_ross\\_nc\\_deq\\_re\\_admin\\_complaint\\_11r-14-r4\\_.pdf](https://www.epa.gov/sites/production/files/2018-05/documents/letter_of_concern_to_william_g_ross_nc_deq_re_admin_complaint_11r-14-r4_.pdf); Kelley J. Donham et al., *Community Health and Socioeconomic Issues Surrounding Concentrated Animal Feeding Operations*, 115 ENVTL. HEALTH PERSP. 317 (2007); Wing, *supra* note 52, at 225.

successfully oppose their construction.”<sup>98</sup> Accordingly, these communities disproportionately bear the consequences of the negative externalities of CAFOs,<sup>99</sup> including the public health harms discussed above,<sup>100</sup> diminished quality of life,<sup>101</sup> and plummeting property values.<sup>102</sup>

Rural communities already face significant health disparities when compared to urban communities, and CAFOs exacerbate those disparities.<sup>103</sup> Individuals suffering adverse health impacts from factory farms include not only members of BIPOC and low-income communities occupied by CAFOs, but also CAFO workers themselves, of whom a large number are undocumented and/or BIPOC.<sup>104</sup>

#### 4. Animal Welfare

CAFOs keep sentient animals in conditions that betray Oregonian values. They “maximize profits by treating animals not as sentient creatures, but as production units. Raised by the thousands at a single location, animals are confined in such tight quarters that they can barely move, let alone behave normally.”<sup>105</sup> Cows in dairy CAFOs often are “injected with the growth hormone that causes

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<sup>98</sup> Miller & Muren, *supra* note 57 (citing Steve Wing & Jill Johnston, *Industrial Hog Operations in North Carolina Disproportionately Impact African-Americans, Hispanics and American Indians*, NC POLICY WATCH (2014), <http://www.ncpolicywatch.com/wp-content/uploads/2014/09/UNC-Report.pdf>; Wendee Nicole, *CAFOs and Environmental Justice: The Case of North Carolina*, 121 ENVIRON. HEALTH PERSPECT. 121 (2013): A182–A189, <https://www.ncbi.nlm.nih.gov/pubmed/23732659>).

<sup>99</sup> *See id.*

<sup>100</sup> *See supra* section III.B.2.

<sup>101</sup> Hribar, *supra* note 56, at 7–8 (noting odors and insect vectors that plague CAFO-occupied communities).

<sup>102</sup> *Id.* at 11 (noting that “property value declines can range from a decrease of 6.6% within a 3-mile radius of a CAFO to an 88% decrease within 1/10 of a mile from a CAFO”).

<sup>103</sup> *See* Virginia Guidry et al., *Connecting Environmental Justice and Community Health*, 79 N.C. Med. J. 5, 324–28 (Sept. 10, 2018), <https://www.ncmedicaljournal.com/content/79/5/324.full>; *see also* Liz Essley Whyte & Chris Zubak-Skees, *Underlying Health Disparities Could Mean Coronavirus Hits Some Communities Harder*, NPR (Apr. 1, 2020), <https://www.npr.org/sections/health-shots/2020/04/01/824874977/underlying-health-disparities-could-mean-coronavirus-hits-some-communities-harder>.

<sup>104</sup> *Factory Farm Workers*, FOOD EMPOWERMENT PROJECT, <https://foodispower.org/factory-farm-workers/> (last visited Sep. 7, 2021).

<sup>105</sup> *Inhumane Practices on Factory Farms*, ANIMAL WELFARE INSTITUTE, <https://awionline.org/content/inhumane-practices-factory-farms> (last visited Sep. 7, 2021).

lameness and mastitis, a painful udder infection.”<sup>106</sup> Moreover, animals are forced into intense confinement—where they are deprived of the opportunity to graze outdoors and are instead left to stand or lie all day in their own manure—without regard for their interests or well-being.<sup>107</sup> The manure causes ammonia emissions to fill the confinement buildings, causing the animals to suffer painful skin, lung, and eye damage.<sup>108</sup>

## 5. Small and Mid-Sized Family Farms

The rise of CAFOs is driving small and mid-sized family farms—historically the backbone of Oregon’s rural economy—to extinction. The “catastrophic decline’ in small and mid-sized dairy farms”<sup>109</sup> is one example: as a direct result of the rise of CAFOs in Oregon, the total number of dairy farms has fallen from 1,900 in 1992 to approximately 230 today.<sup>110</sup> In sum, Oregon’s small and mid-sized family farms cannot—and will not—survive CAFOs.

## IV. CONCLUSION

For the foregoing reasons—and to prevent another regulatory catastrophe like Lost Valley Farm—the Agencies should (1) deny the proposed substantial changes to Noble Dairy’s AWMP and require Noble Dairy to apply for an individual NPDES permit that addresses and mitigates the unique environmental risks that this CAFO already presents, and (2) institute a moratorium on all new or expanding mega dairy CAFOs in Oregon.

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<sup>106</sup> *Id.*

<sup>107</sup> Lost Valley Farm, for example, confined cows to barns overflowing with manure. See Leah Douglas, *Lost Valley debacle leads to effort to limit mega-dairies in Oregon*, OREGON LIVE (Apr. 5, 2019), <https://www.oregonlive.com/business/2019/04/lost-valley-debacle-leads-to-effort-to-limit-mega-dairies-in-oregon.html> (featuring a photo of a dairy cow forced to stand in manure up to her ankles).

<sup>108</sup> THE CRITICAL RELATIONSHIP BETWEEN FARM ANIMAL HEALTH AND WELFARE 7 (2018), ANIMAL WELFARE INSTITUTE, <https://awionline.org/sites/default/files/uploads/documents/FA-AWI-Animal-Health-Welfare-Report-04022018.pdf>.

<sup>109</sup> George Plaven, *Groups call for “mega-dairy” moratorium*, CAPITAL PRESS (Dec. 13, 2018) [https://www.capitalpress.com/ag\\_sectors/dairy/groups-call-for-mega-dairy-moratorium/article\\_a7a01e2a-fcb5-11e8-bc5c-1f802a55fc28.html](https://www.capitalpress.com/ag_sectors/dairy/groups-call-for-mega-dairy-moratorium/article_a7a01e2a-fcb5-11e8-bc5c-1f802a55fc28.html).

<sup>110</sup> Douglas, *supra* note 107.

Sincerely,

A handwritten signature in black ink that reads "Christine Ball-Blakely". The signature is written in a cursive, flowing style.

**Christine Ball-Blakely**  
Staff Attorney  
**ANIMAL LEGAL DEFENSE FUND**  
cblakely@aldf.org

*On behalf of:*

**STAND UP TO FACTORY FARMS**

*Attach. 1*

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Oregon State Plane South Zone (FIPS zone 3602). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
S/MC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

**Base map** information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Josephine County and the State of Oregon. This information was compiled from Josephine County (2008), Oregon Water Resources Department (2006), OR/WA Bureau of Land Management (2000), U.S. Fish and Wildlife Service (2008), Oregon Parks and Recreation Department (2008), and National Geodetic Survey (2007) at a scale of 1:24,000.

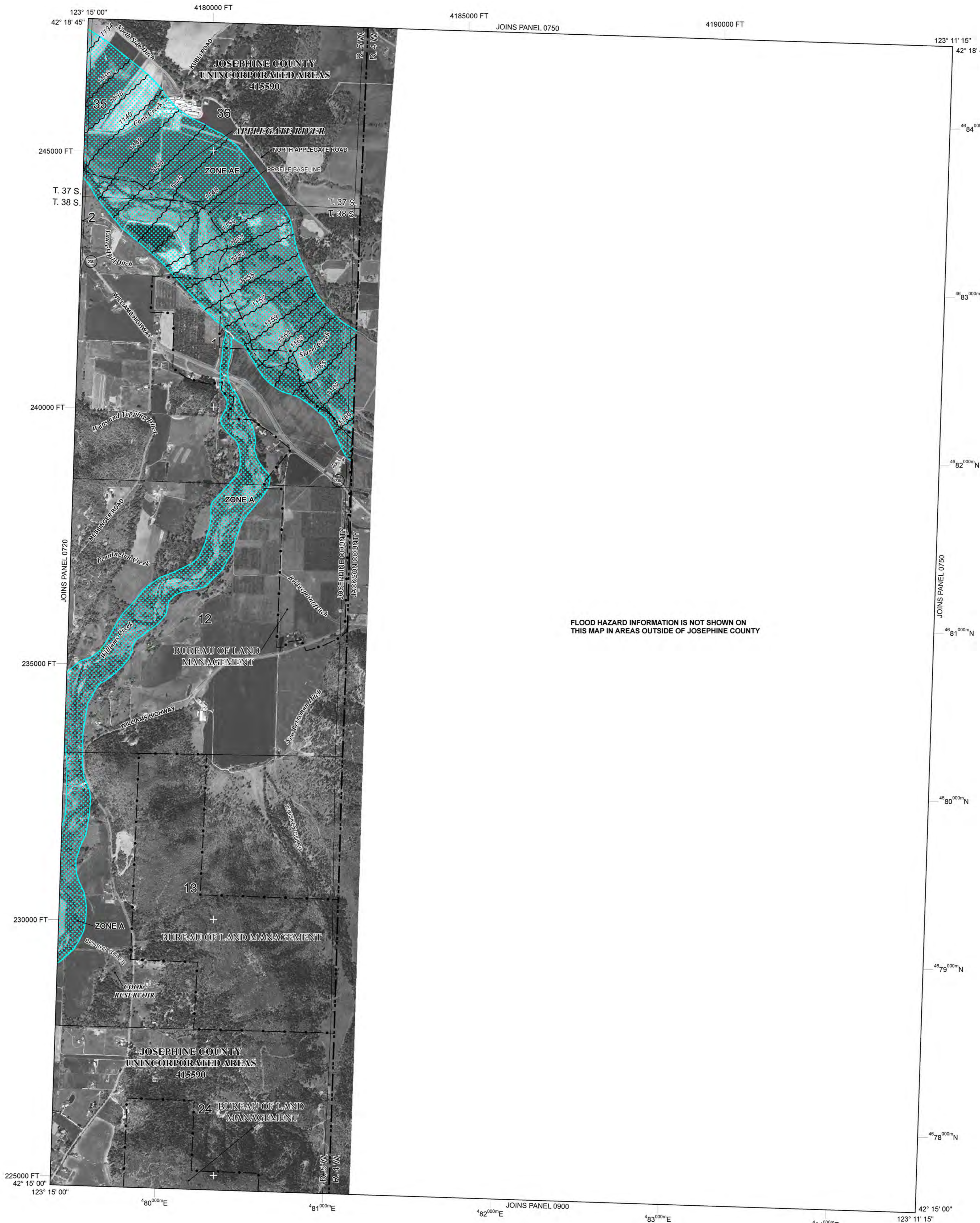
The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

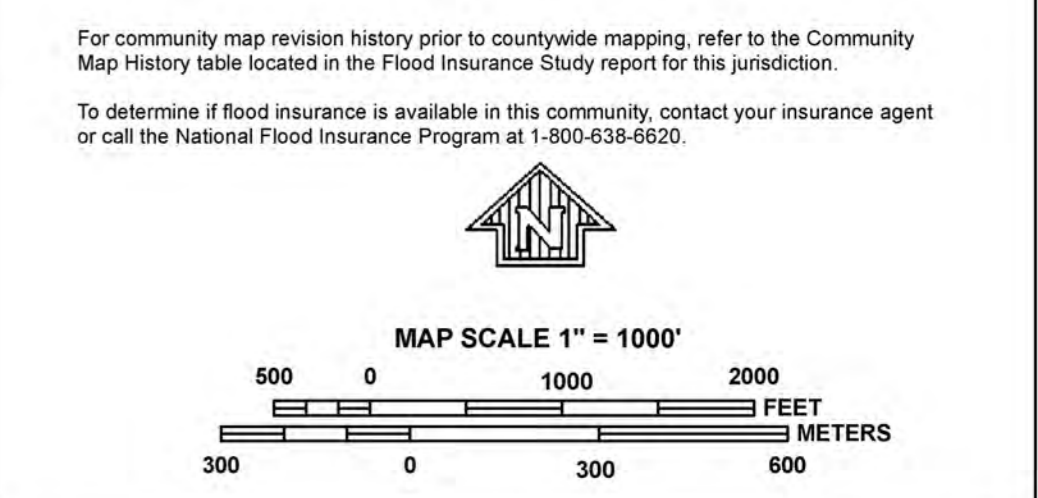
Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfip/>.



**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD  
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
  - ZONE A** No Base Flood Elevations determined.
  - ZONE AE** Base Flood Elevations determined.
  - ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
  - ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
  - ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
  - ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
  - ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
  - ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
  - FLOODWAY AREAS IN ZONE AE  
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
  - OTHER FLOOD AREAS
  - ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.
  - OTHER AREAS
  - ZONE D** Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.
  - COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
  - OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
  - 0.2% Annual Chance Floodplain Boundary
  - Floodway boundary
  - Zone D boundary
  - CBRS and OPA boundary
  - Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
  - Base Flood Elevation line and value; elevation in feet\*  
(EL 987)
  - Base Flood Elevation value where uniform within zone; elevation in feet\*
- \*Referenced to the North American Vertical Datum of 1988
- Cross section line
  - Transect line
- 45° 02' 08", 93° 02' 12"  
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere  
3100000 FT  
5000-foot ticks: Oregon State Plane South Zone (FIPS Zone 3602), Lambert Conformal Conic projection  
48° 00' 00" N  
1000-meter Universal Transverse Mercator grid values, zone 10N  
DX5510 X  
Bench mark (see explanation in Notes to Users section of this FIRM panel)  
M 1.5  
River Mile
- MAP REPOSITORIES  
Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
DECEMBER 3, 2009
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0740E

**FIRM**  
FLOOD INSURANCE RATE MAP  
JOSEPHINE COUNTY,  
OREGON  
AND INCORPORATED AREAS

PANEL 740 OF 1175  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0740	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER  
41033C0740E  
EFFECTIVE DATE  
DECEMBER 3, 2009  
Federal Emergency Management Agency



*Attach. 2*

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 10. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
SSMIC-3, #6202  
1315 East-West Highway  
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**Base map** information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Jackson County GIS Services, State of Oregon OLCD, and the National Geodetic Survey. This information was compiled at various map scales during the time period 2003-2006.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

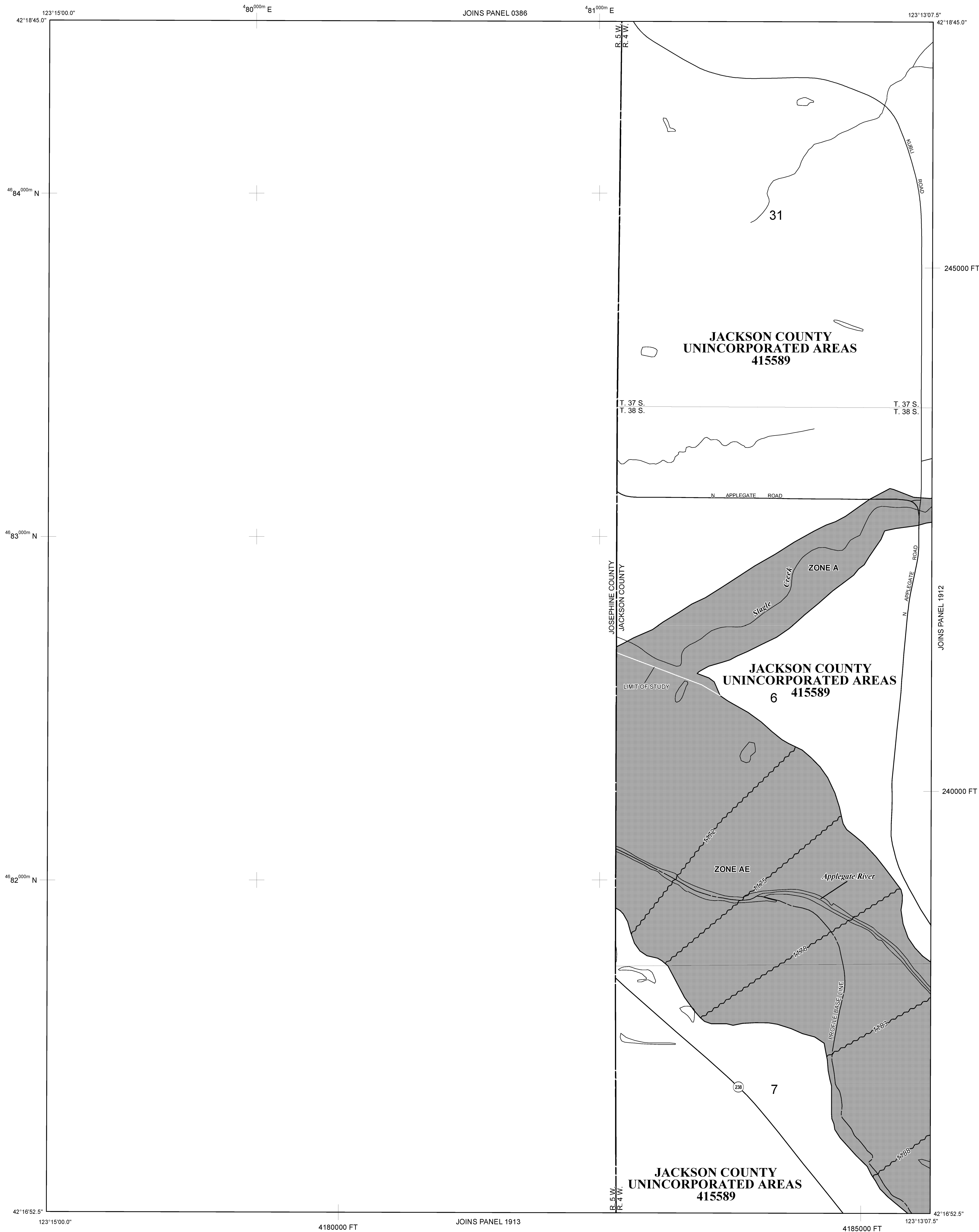
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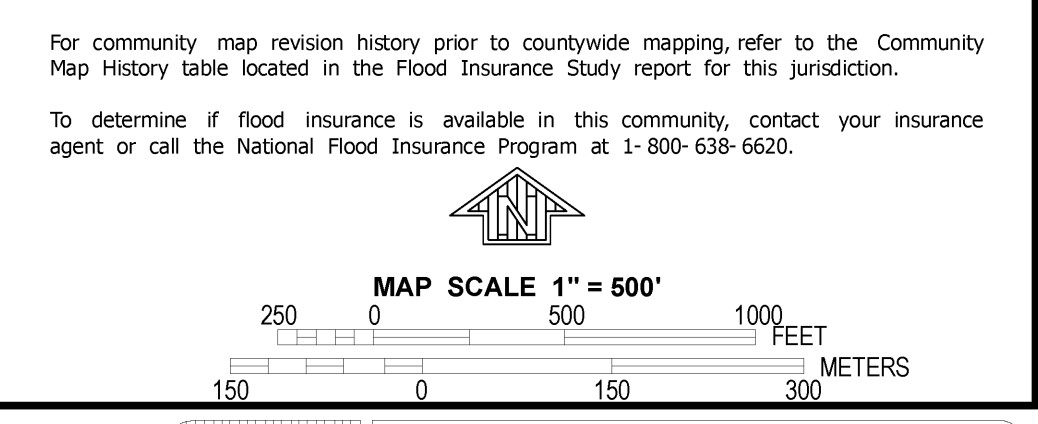
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The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the profile baseline, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.



**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
- The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A**  
No Base Flood Elevations determined.
- ZONE AE**  
Base Flood Elevations determined.
- ZONE AH**  
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO**  
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR**  
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently de-certified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99**  
Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V**  
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE**  
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X**  
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS
- ZONE X**  
Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D**  
Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- Floodplain boundary
- Floodway boundary
- Zone boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*
- \* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid ticks, zone 10
- 5000-foot grid ticks: Oregon State Plane coordinate system, south zone (FIPSZONE 3602), Lambert Conformal Conic
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile
- MAP REPOSITORIES  
Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
May 3, 2011
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 1911F**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**JACKSON COUNTY,**  
**OREGON**  
**AND INCORPORATED AREAS**

**PANEL 1911 OF 2327**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
JACKSON COUNTY	415589	1911	F

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
**41029C1911F**

**EFFECTIVE DATE**  
**MAY 3, 2011**

**Federal Emergency Management Agency**

*Attach. 3*

**NOTES TO USERS**

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 10. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA/NNGS12  
National Geodetic Survey  
SSM/C-3, #6222  
1315 East-West Highway  
Silver Spring, MD 20910-3282

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This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

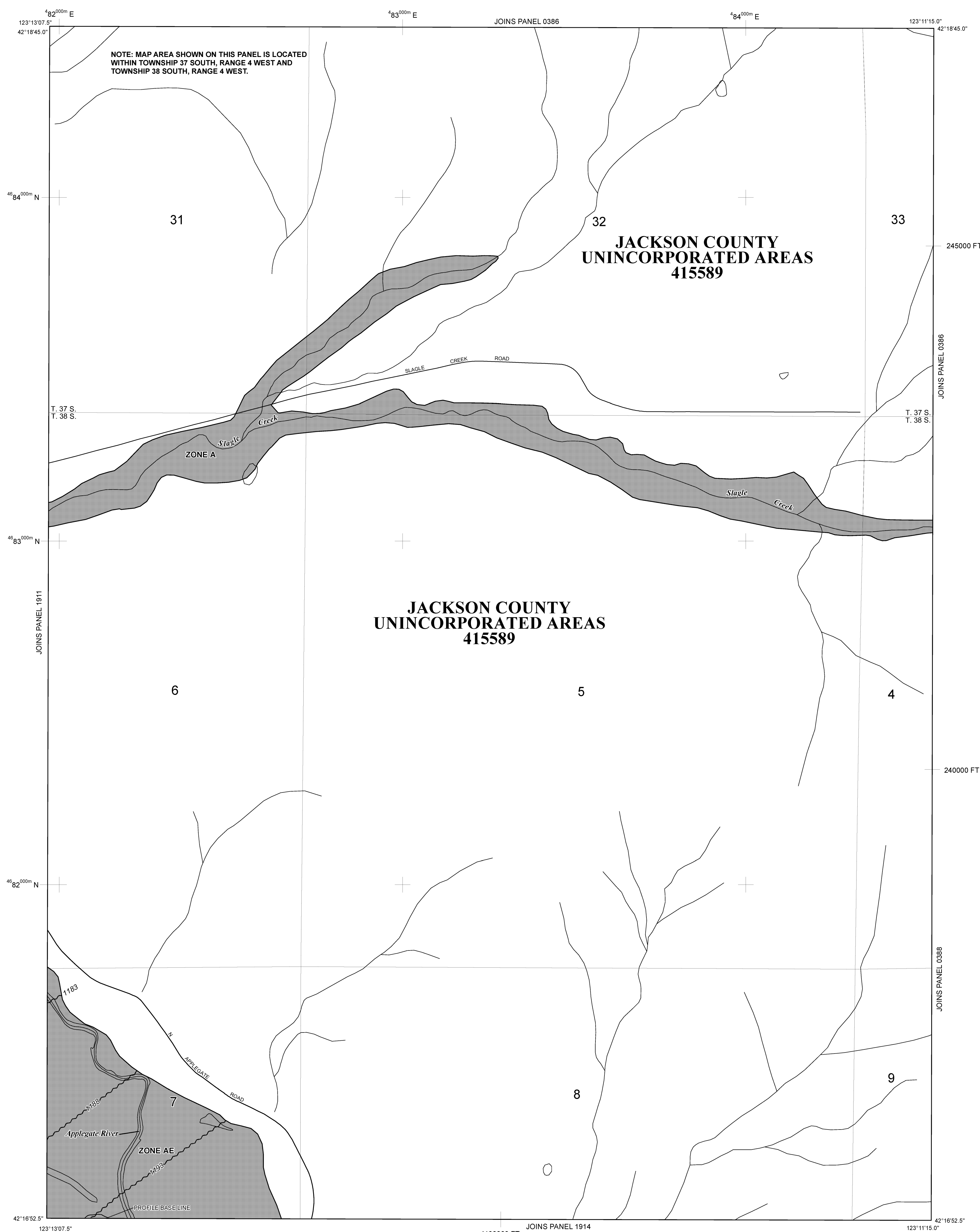
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If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP (1-877-336-2627)** or visit the FEMA website at <http://www.fema.gov/>.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the profile baseline, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A**  
No Base Flood Elevations determined.

**ZONE AE**  
Base Flood Elevations determined.

**ZONE AH**  
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO**  
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR**  
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99**  
Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V**  
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE**  
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X**  
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X**  
Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D**  
Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary  
Floodway boundary  
Zone boundary  
Zone D boundary  
CBRS and OPA boundary  
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.  
Base Flood Elevation line and value; elevation in feet\*  
Base Flood Elevation value where uniform within zone; elevation in feet\*  
\* Referenced to the North American Vertical Datum of 1988 (NAVD 88)  
Cross section line  
Transect line  
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)  
1000-meter Universal Transverse Mercator grid ticks, zone 10  
5000-foot grid ticks: Oregon State Plane coordinate system, south zone (FIPSZONE 3602), Lambert Conformal Conic  
Bench mark (see explanation in Notes to Users section of this FIRM panel)  
River Mile  
MAP REPOSITORIES  
Refer to Map Repositories list on Map Index  
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
May 3, 2011  
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.  
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

**MAP SCALE 1" = 600'**

250 0 500 1000 FEET  
150 0 150 300 METERS

**NFIP**  
**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 1912F**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**JACKSON COUNTY,**  
**OREGON**  
**AND INCORPORATED AREAS**

**PANEL 1912 OF 2327**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
JACKSON COUNTY	415589	1912	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
**41029C1912F**

**EFFECTIVE DATE**  
**MAY 3, 2011**

**Federal Emergency Management Agency**

*Attach. 4*

**NOTES TO USERS**

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

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The **projection** used in the preparation of this map was Oregon State Plane South Zone (FIPS zone 3602). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
S/MC-3 #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

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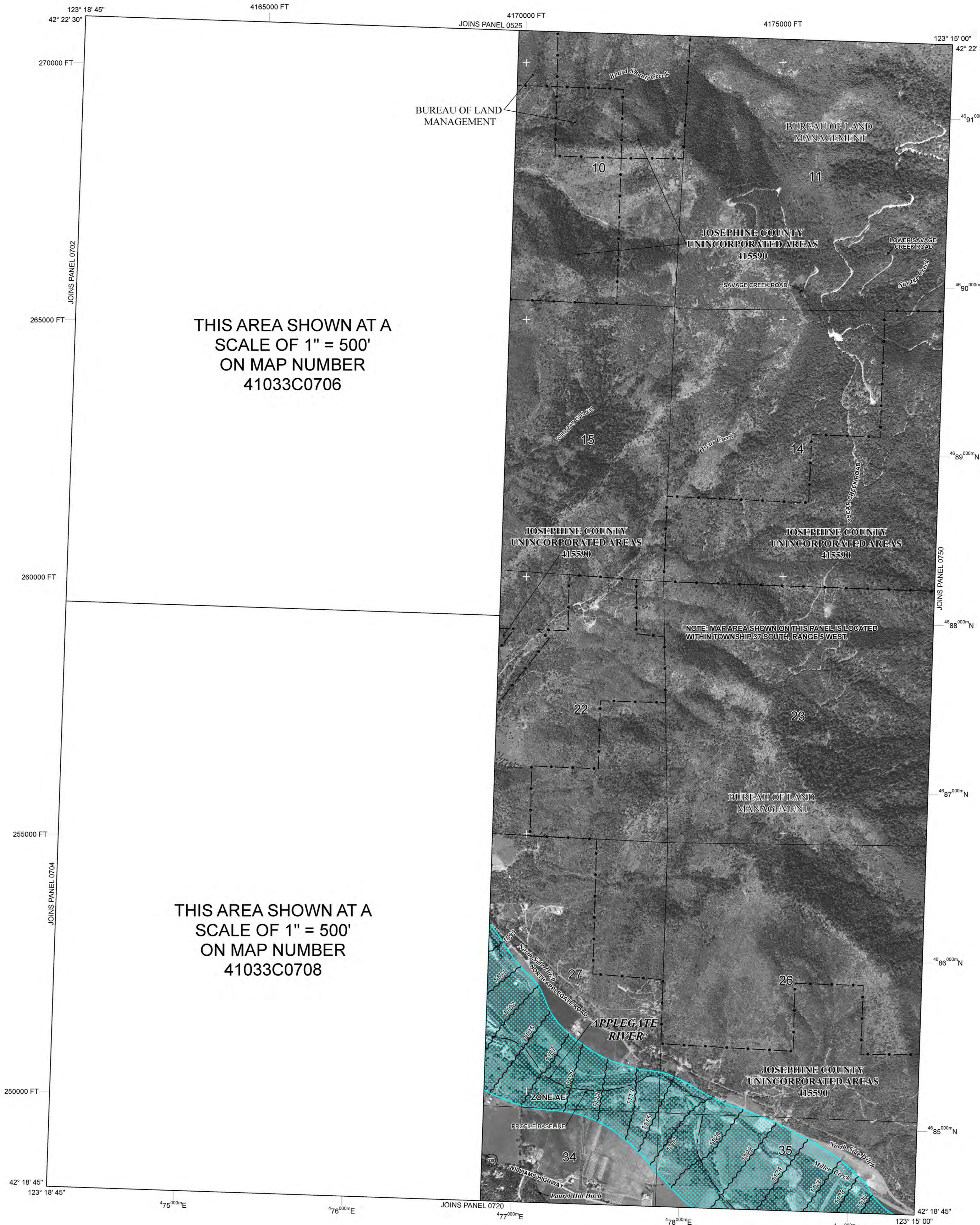
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THIS AREA SHOWN AT A SCALE OF 1" = 500' ON MAP NUMBER 41033C0706

THIS AREA SHOWN AT A SCALE OF 1" = 500' ON MAP NUMBER 41033C0708

**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
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- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
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- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*

\*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Oregon State Plane South Zone (FIPS Zone 3602), Lambert Conformal Conic projection
- 48° 89' 00" N 1000-meter Universal Transverse Mercator grid values, zone 10N
- DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M 1.5 River Mile
- MAP REPOSITORIES Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP DECEMBER 3, 2009
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 1000'

500 0 1000 2000 FEET  
300 0 300 600 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0710E

**FIRM**

**FLOOD INSURANCE RATE MAP**

**JOSEPHINE COUNTY, OREGON AND INCORPORATED AREAS**

PANEL 710 OF 1175  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0710	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41033C0710E  
EFFECTIVE DATE DECEMBER 3, 2009  
Federal Emergency Management Agency

*Attach. 5*

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

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NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

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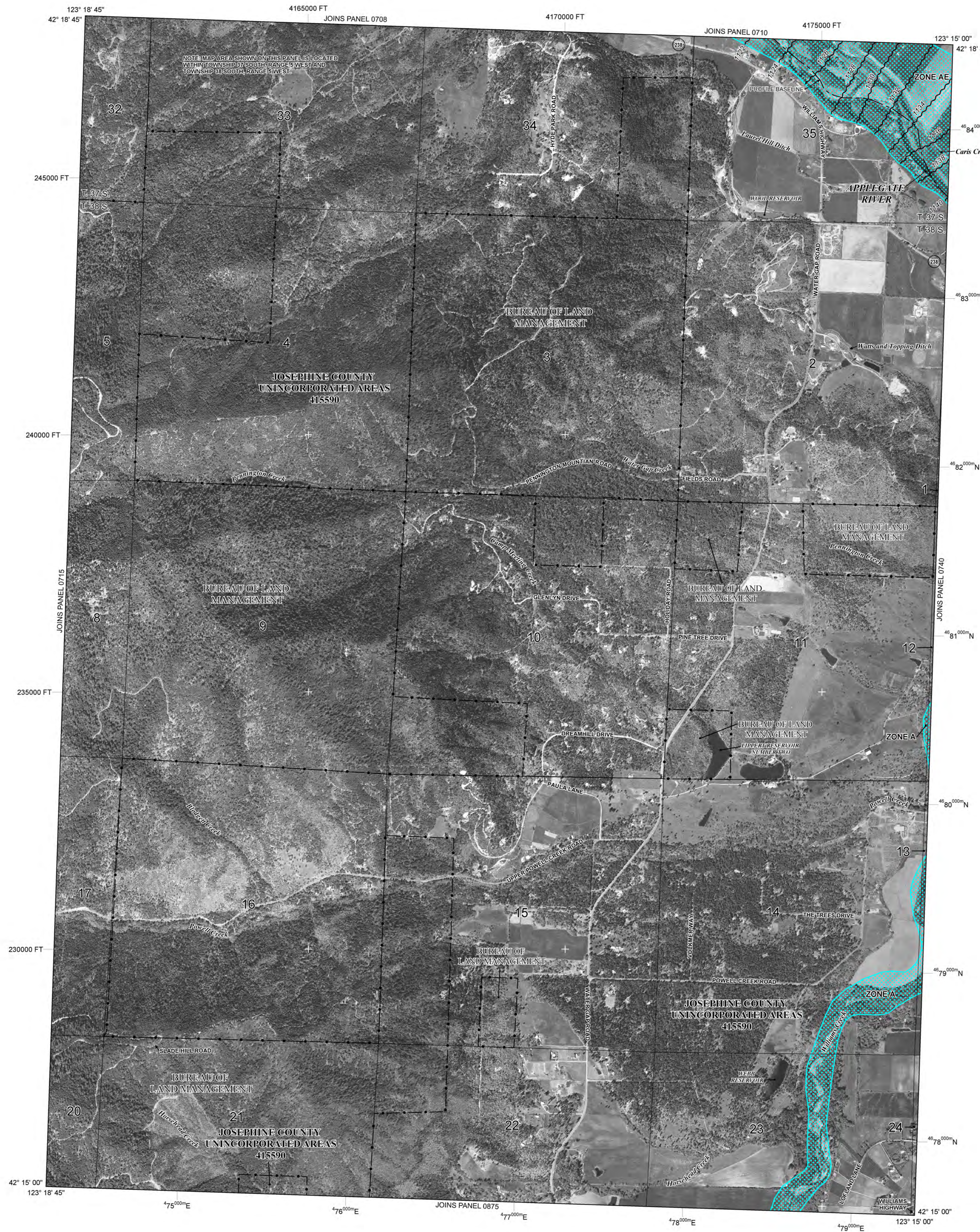
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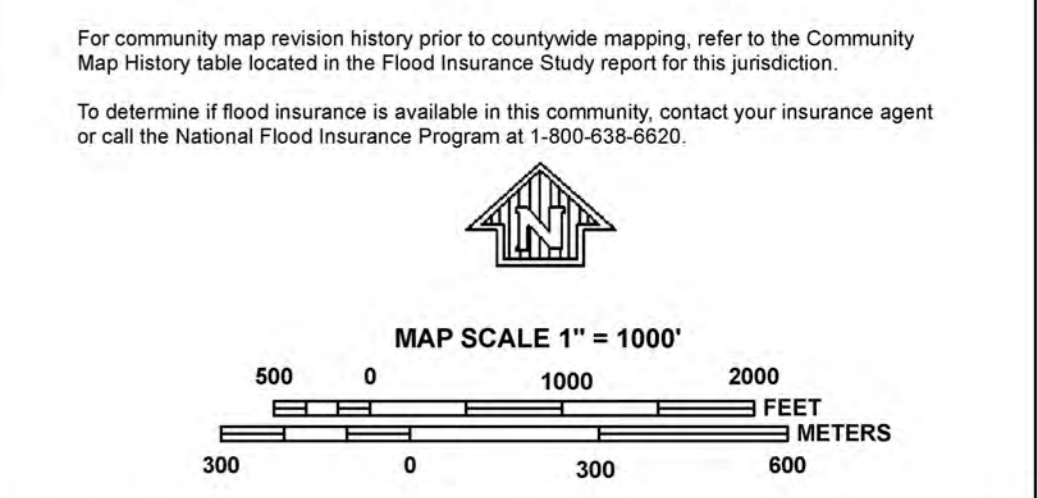
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- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0720E**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**JOSEPHINE COUNTY, OREGON AND INCORPORATED AREAS**

**PANEL 720 OF 1175**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0720	E

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**MAP NUMBER 41033C0720E**

**EFFECTIVE DATE DECEMBER 3, 2009**

Federal Emergency Management Agency



*Attach. 6*

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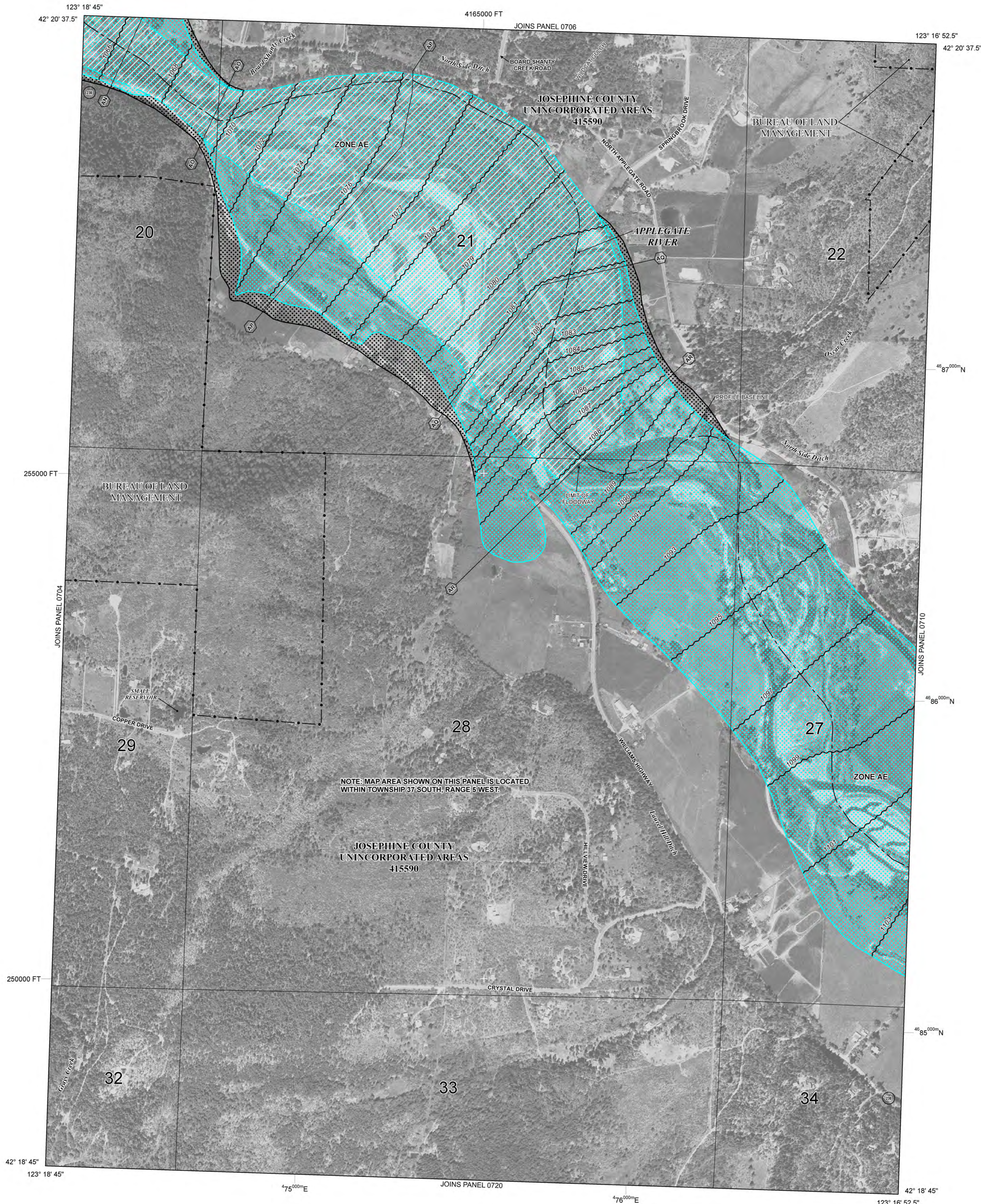
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- 48° 58' 00" N 1000-meter Universal Transverse Mercator grid values, zone 10N
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- M1.5 River Mile
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- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP DECEMBER 3, 2009
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MAP SCALE 1" = 500'

250 0 500 1000 FEET  
150 0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0708E**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**JOSEPHINE COUNTY, OREGON AND INCORPORATED AREAS**

**PANEL 708 OF 1175**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
JOSEPHINE COUNTY	415590	0708	E

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**MAP NUMBER 41033C0708E**  
**EFFECTIVE DATE DECEMBER 3, 2009**  
Federal Emergency Management Agency

*Attach. 7*

Water Description Use  
Easterday Farms Dairy

*single use  
line turn  
part to  
CAFO 9/15/20*

Description	Average Daily Gallons	<i>Mean over year</i> Average Daily CFS	Annual Acre Feet	Source	Approval/Contract Required
Domestic Use for human consumption and sanitation - both employees and owners/operators	4850	0.0075	5.43	1) Port of Morrow 2) Ground Water/Surface Water use transfer <i>Bosma + Neudink</i>	1) Current LOI & future contract POM 2) ODWR Transfer Approval
Watering Livestock	336,400	0.5205	376.64	1) Port of Morrow 2) Ground Water/Surface Water use transfer	1) Current LOI & future contract POM 2) ODWR Transfer Approval
Water for the milking system, cleanup, and maintenance	46,500	0.0719	52.06	1) Port of Morrow 2) Ground Water/Surface Water use transfer	1) Current LOI & future contract POM 2) ODWR Transfer Approval
Water for air misting	35,000	0.0541	39.19	1) Port of Morrow 2) Ground Water/Surface Water use transfer	1) Current LOI & future contract POM 2) ODWR Transfer Approval
Other Water use for milk/dairy production	40,000	0.0618	44.79	1) Port of Morrow 2) Ground Water/Surface Water use transfer	1) Current LOI & future contract POM 2) ODWR Transfer Approval
Water used in flushing system for cleaning livestock holding areas	360,000	0.557	403.07	1) Port of Morrow 2) Ground Water/Surface Water use transfer	1) Current LOI & future contract POM 2) ODWR Transfer Approval
Totals	822,750	1.2728	921.18		
Water for dilution of wastewater for application at agronomic rates	N/A	<i>apply to ground water or overfertilize crops</i>			
Crop Production 5333 Acres		84.96	23998	CID	Certificates 80062, 83517, 86856, 86857, 86992, 86993

*B112/coly*

*Part of mean - 1,0200 AP annually*

*Attach. 4*



# Fact Sheet

**The U.S. Environmental Protection Agency (EPA)  
Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) Permit to  
Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) to:**

## **Concentrated Animal Feeding Operations in the State of Idaho**

Public Comment Start Date: October 23, 2019  
Public Comment Expiration Date: December 9, 2019

Technical Contact: Nicholas Peak  
208-378-5765  
peak.nicholas@epa.gov

### **EPA Proposes to Reissue NPDES Permit No. IDG010000**

The U.S. Environmental Protection Agency (EPA) proposes to reissue a National Pollutant Discharge Elimination System (NPDES) general permit for concentrated animal feeding operations (CAFOs) in Idaho excluding Tribal lands (Draft Permit). The draft permit proposes to establish conditions for the discharge of pollutants from these CAFOs to waters of the United States.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures;
- descriptions of the types of facilities and discharges covered under the General Permit;
- a description of proposed effluent limitations and other provisions of the draft General Permit; and
- technical material supporting the conditions in the Draft Permit

### **Public Comment**

Persons wishing to comment on the draft permit may do so in writing by the expiration date of the public notice. All comments must be in writing and must include the commenter's name, address, telephone number, the permit name, and the permit number. Comments must include a concise statement of their basis and any relevant facts the commenter believes EPA should consider in making its decision regarding the conditions and limitations in the final permit. All written comments and requests must be submitted to the attention of the Director, Water Division, at the following address: U.S. EPA, Region 10, 1200 6th Avenue, Suite 155, WD 19-

C04, Seattle, WA 98101-3188. Alternatively, comments may be submitted by facsimile to 208-378-5744; or submitted via e-mail to [peak.nicholas@epa.gov](mailto:peak.nicholas@epa.gov) by the end date of the public comment period.

Persons wishing to request that a public hearing be held may do so, in writing, by the end date of this public comment period. A public hearing is a formal meeting, on the record, wherein EPA officials hear the public's views and concerns about an EPA action or proposal. A request for a public hearing must state the nature of the issues to be raised, reference the permit name and NPDES permit number, and include the requester's name, address, and telephone number.

After the comment period closes, and all significant comments have been considered, EPA will review and address all submitted comments. EPA Region 10's Director of the Water Division will then make a final decision regarding permit issuance. If no comments are received, the tentative conditions in the draft permit will become final.

Pursuant to Section 509(b)(1) of the Clean Water Act, 33 U.S.C. § 1369(b)(1), any interested person may appeal the permit in the Ninth Circuit Court of Appeals within 120 days following notice of EPA's final decision for the permit.

#### **State Clean Water Act Section 401 Certification**

The Idaho Department of Environmental Quality (IDEQ) has provided a draft certification for the permit pursuant to Section 401 of the Clean Water Act, 33 U.S.C. § 1341 (see Appendix A). EPA may not issue the NPDES permit until the IDEQ has granted, denied, or waived certification. For more information about the draft certification, please contact Loren Moore, at (208) 373-0158 or at: [loren.moore@deq.idaho.gov](mailto:loren.moore@deq.idaho.gov). Comments regarding the certification should be directed to:

Loren Moore  
401 Water Quality-Based  
Permitting Coordinator  
Idaho Department of  
Environmental Quality  
1410 N. Hilton  
Boise, ID 83706

#### **Documents are Available for Review**

The draft permit and related documents can be reviewed or obtained by visiting or contacting EPA's Regional Office in Seattle, Washington, or Idaho Operations Office in Boise, Idaho, between 8:30 a.m. and 4:00 p.m., Monday through Friday at the addresses below. The draft permits, fact sheet, and other information can also be found by visiting the Region 10 NPDES website at: <https://www.epa.gov/npdes-permits/about-region-10s-npdes-permit-program>.

United States Environmental Protection Agency, Region 10  
1200 Sixth Avenue, Suite 155, WD 19-C04  
Seattle, WA 98101-3188  
(206) 553-0523  
Toll Free 1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The Fact Sheet and draft permit are also available at:

United States Environmental Protection Agency, Region 10  
Idaho Operations Office  
950 W. Bannock Street, Suite 900  
Boise, ID 83702

## **I. INTRODUCTION**

### **A. General Permits**

Section 301(a) of the Clean Water Act (CWA), 33 U.S.C. § 1311(a), prohibits the discharge of pollutants to waters of the U.S. except in accordance with a National Pollutant Discharge Elimination System (NPDES) permit. CWA Section 402, 33 U.S.C. § 1342, authorizes EPA to issue NPDES permits authorizing such discharges subject to requirements that implement CWA Sections 301, 304, and 401, 33 U.S.C. §§ 1311, 1314, and 1341.

These requirements must include effluent limitations that implement technology-based limits as well as any more stringent limit necessary to protect state water quality standards. Violation of a condition contained in an NPDES permit, whether an individual or general permit, is a violation of the CWA and subjects the operator of the permitted facility to the penalties specified in Section 309 of the CWA, 33 U.S.C. § 1319.

40 CFR § 122.28 allows EPA to issue general permits to regulate numerous facilities in one permit when the facilities:

- Are located within the same geographic area;
- Involve the same or substantially similar types of operations;
- Discharge the same types of wastes;
- Require the same effluent limits or operating conditions;
- Require the same or similar monitoring requirements; and
- In the opinion of EPA, are more appropriately controlled under a general permit rather than an individual permit.

Using general permits conserves resources and reduces the paperwork burden associated with obtaining discharge authorization for the regulated community. All of the concentrated animal feeding operations (CAFOs) subject to this permit require the same effluent limits, operating conditions, and monitoring requirements, other than where specific water quality-based limits are implemented to be consistent with wasteload allocations (WLAs) articulated in an



approved Total Maximum Daily Load (TMDL). Moreover, the operations are substantially similar and all are located within the state of Idaho. Therefore, EPA has determined that a general permit is the appropriate mechanism to address the majority of CAFOs that are subject to the requirements of the NPDES program and the CWA.

**B. Permit History**

The previous General Permit for Concentrated Animal Feeding Operations in Idaho, NPDES Permit No. IDG01000, went into effect on May 9, 2012 and expired on May 8, 2017. No facilities were covered under the 2012 permit.

**C. NPDES NPDES Authorization**

In 2014, the Idaho Legislature revised the Idaho Code to direct the Idaho Department of Environmental Quality (IDEQ) to seek authorization from EPA to administer the NPDES permit program for the State of Idaho. On August 31, 2016, IDEQ submitted a program package pursuant to CWA Section 402(b), 33 U.S.C. 1342(b) and 40 CFR § 123.21. On June 5, 2018, EPA authorized IDEQ to implement a phased NPDES permit program beginning July 1, 2018. Based on this phased approach, IDEQ will obtain permitting for general permits on July 1, 2020. At that point in time, all documentation required by the permit would be sent to IDEQ rather than to EPA and any decision under the permit stated to be made by EPA or jointly between EPA and IDEQ will be made solely by IDEQ. Permittees will be notified by IDEQ when this transition occurs.

**D. Summary of Changes to the Permit**

<b>2012 Permit</b>	<b>Draft Permit</b>
Section I.A. Permit Area. <ul style="list-style-type: none"> <li>• Provided coverage for CAFOs in Indian Country</li> </ul>	Section I.A. Permit Area and Eligibility. <ul style="list-style-type: none"> <li>• Excludes CAFOs in Indian Country</li> </ul>
Section I.F. Requirements for an Individual NPDES Permit. <ul style="list-style-type: none"> <li>• Did not include CAFOs in Indian Country</li> </ul>	Section I.F. Individual Permit Coverage. <ul style="list-style-type: none"> <li>• Includes CAFOs in Indian Country</li> </ul>
Section II.A. Effluent Limitations and Standards Applicable to the Production Area <ul style="list-style-type: none"> <li>• Removed Section II.A.3.h. regarding requirements over CAFOs constructing or modifying existing wastewater or manure storage structures.</li> <li>• Removed Section II.A.3.i regarding requirements for keeping a rain gauge onsite with a log of all measurable rainfall events.</li> </ul>	Section II.A. Effluent Limitations and Standards Applicable to the Production Area <ul style="list-style-type: none"> <li>• Added Section II.A.3. regarding no discharge requirements for new source swine, poultry and veal facilities.</li> </ul>

<ul style="list-style-type: none"> <li>• Removed Section II.A.3.j regarding requirements to isolate open lots from run-on from outside drainages.</li> <li>• Removed Section II.A.3.k regarding requirements on facilities expanding operations.</li> <li>• Removed Section II.A.4. Other Requirements/Prohibitions Applicable to Production Areas</li> <li>• Removed Section II.A.5. Discharges to Water Quality Impaired Waters</li> </ul>	
<p>Section II.B. Effluent Limitations and Standards Applicable to the Land Application Area</p> <ul style="list-style-type: none"> <li>• Removed Section II.B.1.i regarding complete on-site records.</li> <li>• Removed Section II.B.2</li> <li>• Removed Section II.B.3</li> </ul>	<p>Section II.B. Effluent Limitations and Standards Applicable to the Land Application Area</p> <ul style="list-style-type: none"> <li>• Modified Section II.B.10 which prohibits the application of manure, litter, or process wastewater to frozen, snow covered, or saturated soils.</li> </ul>
<p>Section III.A.3. NMP Content</p> <ul style="list-style-type: none"> <li>• Removed Section III.A.3.i regarding applications rates being expressed in the NMP consistent with either the Linear or Narrative Rate approach.</li> <li>• Removed Section III.A.3.J regarding including a site map of the production area and land application area.</li> </ul>	<p>Section III.A.2. NMP Content</p> <ul style="list-style-type: none"> <li>• Sections III.A.2.a – i have been modified to include more specific requirements for the NMP Content.</li> <li>• Section III.A.2.a requires CAFOs to use IDAWM to evaluate wastewater and manure storage structures. CAFOs must evaluate existing wastewater and manure storage using Washington NRCS Engineering Technical Note 23, “NRCS Assessment Procedures for Existing Waste Storage Ponds”.</li> <li>• Section III.A.2.f requires CAFOs to evaluate each land application area be evaluated using Idaho NRCS Water Quality Technical Note 6, “Idaho Nutrient Transport Risk Assessment, (INTRA). Any land application area that receives a risk assessment rating of medium or greater must have appropriate conservation practices installed to reduce the rating to low.</li> <li>• Section III.A.2.g requires CAFOs to sample soil and manure in accordance to guidance from the University of Idaho instead of Idaho NRCS.</li> </ul>

	<ul style="list-style-type: none"> <li>• Section III.A.2.h requires CAFOs to generate annual nutrient budgets using University of Idaho fertilizer guides or other land grant university fertilizer or crop production guides.</li> <li>• <i>The land application requirements stipulated in Sections II.B.1, II.B.2, III.A.2.g, II.A.2.h, and Appendices C, E and I represent the narrative rate approach [40 CFR § 122.42(e)(5)(ii)]. EPA has identified spreadsheets (Idaho's NRCS IDAWM, Appendix C and Idaho's NRCS Water Quality Technical Note #6, Appendix E) that incorporate many of the required elements and should simplify the nutrient management planning process for operators.</i></li> </ul>
<p>Section III.A.7. Requirements Associated with NMP Implementation</p> <ul style="list-style-type: none"> <li>• Removed entire section which was repetitive from earlier sections of the previous permit.</li> </ul>	<p>Section III.A.</p> <ul style="list-style-type: none"> <li>• Requires CAFOs to develop, submit, and implement a site-specific Nutrient Management Plan (NMP). The NMP shall identify and describe practices that will be implemented to ensure compliance with the effluent limitations and special conditions of this permit (Sections II and III).</li> </ul>
<p>Section III.A.8. Certified Specialists to Develop NMPs</p> <ul style="list-style-type: none"> <li>• Removed entire section.</li> </ul>	
<p>Section III.D.2. Wastewater or Manure Storage Structure Dewatering</p> <ul style="list-style-type: none"> <li>• Removed entire section.</li> </ul>	
<p>Section III.D.3. Spills</p> <ul style="list-style-type: none"> <li>• Removed entire section.</li> </ul>	
<p>Section III.D.4. Employee Training</p> <ul style="list-style-type: none"> <li>• Removed entire section.</li> </ul>	
<p>Section IV. Inspection, Monitoring, Record Keeping, and Reporting</p> <ul style="list-style-type: none"> <li>• Removed Table IV-A. NPDES CAFO Permit Record Keeping Requirements.</li> </ul>	<p>Section IV. Records, Reporting, Monitoring, and Notification</p> <ul style="list-style-type: none"> <li>• Added Section IV.A.1. Record Keeping Requirements for the Production Area.</li> <li>• Added Section IV.A.2. 2. Record Keeping Requirements for the Land Application Area.</li> </ul>

	<ul style="list-style-type: none"><li>• Added Section IV.B.3. 3. The annual report must include all the information detailed in the Annual Report Template in Appendix H. The permittee may use the fillable pdf template provided or may compile all the required information in a separate document.</li></ul>
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## II. PROPOSED EFFLUENT LIMITATIONS AND OTHER PERMIT PROVISIONS

### A. General

#### 1. Permit Area and Eligibility

The permit offers NPDES permit coverage for discharges from operations defined as CAFOs in the State of Idaho, excluding Indian Country. See 40 CFR § 122.23(b)(2). CAFOs are point sources subject to the NPDES permitting program. A permit is required for any CAFO that discharges pollutants to waters of the U.S. See 40 CFR § 122.23(d)(1). The draft permit provides coverage for any eligible facilities that discharge and meet the following criteria:

- The facility meets the definition of a large, medium, or small CAFO defined in 40 CFR § 122.23(b)(4), (6), and (9);
- is located in the permit coverage area;
- is not specifically excluded from coverage per one of the conditions specified in Section I.F.1 of the permit.

#### 2. Application for Coverage

In accordance with 40 CFR §§ 122.21(i)(1)(x), 122.28(b)(2), and 122.23(d)(3), a CAFO operator seeking coverage under this permit must submit a signed Notice of Intent (NOI) (see CAFO General Permit Appendix A) and nutrient management plan (NMP) to EPA. EPA Form 2B serves as the NOI for this permit. Copies of the NOI must also be submitted to IDEQ and the Idaho State Department of Agriculture (ISDA).

Pursuant to 40 CFR § 122.23(h), upon receipt, EPA will review the NOI and NMP to ensure that all permit requirements are fulfilled. EPA may request additional information from the CAFO owner or operator if additional information is necessary to complete the NOI and NMP or to clarify, modify, or supplement previously submitted material. If EPA makes a preliminary determination that the NOI is complete, the NOI, NMP, and draft terms of the NMP to be incorporated into the permit will be made available at EPA Region 10's website at: <https://www.epa.gov/npdes-permits/about-region-10s-npdes-permit-program> for a thirty (30) day public review and comment period. EPA will respond to comments received during this period and, if necessary, require the CAFO owner or operator to revise the NMP. If determined appropriate by EPA, CAFOs will be granted coverage under the permit upon written notification by EPA. If EPA determines that the facility is ineligible for coverage under the permit, EPA

will inform the facility an individual permit is required. Until the CAFO owner/operator receives written notification from EPA that the CAFO is authorized to discharge under the permit, any discharges from the CAFO are not covered by a NPDES permit.

CAFOs classified as “new sources” must conduct an environmental review pursuant to the National Environmental Policy Act (NEPA) [40 CFR Part 6]. A CAFO is a “new source” if construction commenced after April 14, 2013, and it meets the criteria set forth in 40 CFR § 122.29. *See* 40 CFR § 122.2 and 68 Fed. Reg. 7176, 7200 (February 12, 2003). New Source CAFOs in Idaho must submit a Finding of No Significant Impact (“FONSI”) or an Environmental Impact Statement (“EIS”) issued by EPA Region 10 along with the NOI and NMP in order to obtain coverage under the general permit.

An existing CAFO that proposes to expand their facility would not become a new source unless the modifications totally replace the process or production equipment that causes the discharge of pollutants, or the new/modified facility’s production and waste handling processes are substantially independent of the preexisting source. *See* 68 Fed. Reg. at 7200. For an existing CAFO, the draft permit adds a procedure to be used for permit coverage of a significant expansion that is constructed after the effective date of the permit. If EPA determines the expansion to be a new source, the permittee must include a FONSI or an EIS issued by EPA Region 10 along with the NOI to have the expansion covered by the permit.

### **3. Permit Expiration**

In accordance with 40 CFR § 122.46(a), NPDES permits shall be effective for a fixed term not to exceed five (5) years. Therefore, this permit will expire five years from the effective date of the final permit. If the permit is not reissued prior to the expiration date, it shall be eligible for an administrative extension of coverage in accordance with the Administrative Procedures Act (APA) and will remain in full force. However, the EPA cannot provide coverage under this general permit to any Permittee who submits the NOI requesting permit coverage after the permit expiration date.

### **4. Change in Ownership**

If a change of ownership occurs at a CAFO whose discharge is authorized under the permit, coverage under the permit will automatically transfer under the following conditions:

- The current permittee notifies EPA at least 30 days prior to the proposed transfer date;
- The notice includes a written agreement between the existing and new permittees containing a specific transfer date for permit responsibility, coverage and liability between them;
- EPA does not notify the existing permittee and the proposed permittee that the facility is no longer eligible for coverage under the General Permit.

If the new owner or operator modifies any part of the Nutrient Management Plan (NMP), the NMP shall be submitted to EPA in accordance with Section III.A.5 of the permit and 40 CFR § 122.42(e)(6), and may be subject to the public notice and comment requirements of Section

I.B.4 of the permit.

### **5. Termination of Permit Coverage**

In accordance with 40 CFR § 122.64, EPA may terminate coverage under the permit by determining, in writing, that the facility no longer requires NPDES coverage because one of the following conditions is met:

- The facility has ceased all operations and all waste retention structures have been properly closed in accordance with the Idaho Natural Resources Conservation Service (NRCS) Conservation Practice Standard No. 360, Closure of Waste Impoundment contained in the NRCS Field Office Technical Guide and all other remaining stockpiles of manure, litter, or process wastewater not contained in a wastewater or manure storage structure are properly disposed of in accordance with Section III.C; or
- The facility is no longer a CAFO that discharges manure, litter, or process waste water to waters of the United States; or
- In accordance with 40 CFR § 122.64, the entire discharge is permanently terminated by elimination of the flow or by connection to a publicly owned treatment works (POTW).

The permittee may request termination of coverage under the permit in accordance with 40 CFR §§ 122.64 and 122.22(d) for one of the reasons stipulated above. The request must be made in writing and submitted to EPA. Termination of coverage will become effective 30 days after the written notice is sent by EPA, unless the permittee objects within that time frame.

### **6. Individual Permit Coverage**

In accordance with 40 CFR § 122.28(a)(4)(ii), EPA may exclude specific sources or areas from coverage under the permit. The following CAFOs are not eligible for coverage under this NPDES general permit, and must apply for an individual permit:

- CAFOs that have been notified by EPA that they are ineligible for coverage under this general permit due to a past history of non-compliance. [40 CFR § 122.28(b)(3)(A)]
- CAFOs that are seeking coverage that will adversely affect species that are federally-listed as endangered or threatened (“listed”) under the Endangered Species Act (ESA) or adversely modify critical habitat of those species. This provision is included in accordance with the outcome of consultation pursuant to Section 7 of the ESA.
- CAFOs that are seeking coverage that will have the potential to affect historic properties. CAFO owners/operators must determine whether their permit-related activities have the potential to affect a property that is listed or eligible for listing on the National Register of Historic Places, pursuant the National Historic Preservation Act. If the CAFO seeking coverage will have an effect on historic properties, the CAFO's owners/operators must consult with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representatives regarding measures to mitigate or prevent any adverse effects on historic properties.
- CAFOs with discharges to a designated Outstanding Resource Water. As of the effective date of this permit there are no Outstanding Resource Waters approved by the Idaho

Legislature. This provision is included in accordance with the State of Idaho's certification of this permit pursuant to CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1) and 40 CFR § 124.53.

- CAFOs located in Indian Country. Since IDEQ will assume administration of this permit on July 1, 2020 and since EPA retains permitting authority on tribal lands in Idaho, EPA has decided to exclude coverage to CAFOs located in Indian Country from this permit. If a CAFO located on tribal land requires NPDES permit coverage, then the facility should apply for an individual permit with EPA Region 10.

Pursuant to 40 CFR § 122.28(b)(3), EPA may require any discharger applying for coverage under this general permit to apply for and obtain an individual permit. EPA will notify the operator, in writing, that an application for an individual permit is required and will set a time for submission of the application. Coverage of the facility under this general NPDES permit is automatically terminated when: (1) the operator fails to submit the required individual NPDES permit application within the defined time frame; or (2) the individual NPDES permit is issued by EPA.

Pursuant to 40 CFR § 122.28(b)(3)(iii), any operator authorized under the general permit who believes that the terms and conditions of the general permit are not appropriate for his/her facility, either before or after obtaining coverage under the permit, may request to be covered by an individual permit. The operator shall submit an application, with reasons supporting the request, to EPA no later than 90 days after the publication by EPA of the general permit in the Federal Register. This application shall include NPDES permit application Forms 1 and 2C, together with the same information required for the NOI.

## **B. EFFLUENT LIMITATIONS AND STANDARDS**

### **1. Overview**

Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants by any point source into waters of the U.S. except in accordance with a permit. CWA § 402, 33 U.S.C. § 1342, authorizes EPA to issue NPDES permits authorizing discharges subject to limitations and requirements imposed pursuant to Sections 101, 301(b), 304, 308, 401, and 403 of the CWA, 33 U.S.C. §§ 1251, 1311(b), 1314, 1318, 1341, and 1343. Pursuant to these statutory provisions, EPA is required to include conditions in a permit that meet technology-based effluent limitations as well as any requirement necessary to meet applicable state water quality standards. Moreover, NPDES permits generally contain record-keeping and reporting requirements pursuant to CWA § 308, 33 U.S.C. § 1318.

Manure, litter, and process wastewater discharges resulting from CAFOs are subject to the requirements found at 40 CFR §§ 122.23 and 122.42(e). Many CAFOs are also subject to the effluent limitation guidelines (ELGs) found at 40 CFR Part 412. Pursuant to CWA § 402(a)(2), 33 U.S.C. § 1342(a)(2), and 40 CFR § 122.44(k)(3), best management practices (BMPs) are being proposed in the draft permit. These practices are reasonably necessary either to achieve effluent limitations or to carry out the Act's goals of eliminating the discharge of pollutants to maintain water quality.

The draft permit has been developed to fulfill the NPDES general permit requirements in accordance with 40 CFR §§ 122.42(e)(1)(i), 412.31, and 412.43.

## **2. Effluent Limitations and Standards Applicable to the Production Area**

### Discharge Standards for All Facilities

The production area at a CAFO includes the animal confinement areas and other parts of the facility, including manure storage areas, raw materials storage areas, and waste containment areas. (40 CFR § 122.23(b)(8).)

For all types of animals and all facilities other than swine, poultry and veal “new sources”, the permit prohibits the discharge of manure, litter or process wastewater pollutants into waters of the U.S. except under the following condition: whenever precipitation causes an overflow of manure, litter or process wastewater, pollutants may be discharged provided that the production area is designed, constructed, operated and maintained to contain all manure, litter and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour storm event for the location of the CAFO.

“New source” CAFOs, are facilities where construction began prior to April 14, 2003. This applies to CAFOs that meet or exceed the following: 2,500 swine each weighing 55 pounds or more; 10,000 swine each weighing less than 55 pounds; 30,000 laying hens or broilers if the facility uses a liquid manure handling system; 82,000 laying hens if the facility uses other than a liquid manure handling system; 125,000 chickens other than laying hens if the facility uses other than a liquid manure handling system; 55,000 turkeys; and 1,000 veal calves (40 CFR § 412.40). The new source performance standards for production areas of swine, poultry and veal calf operations (40 CFR § 412.46) require that there be no discharge of manure, litter, or process wastewater pollutants into waters of the U.S. from the production area.

### Additional Requirements for All Facilities

Manure, litter, and/or process wastewater discharges resulting from CAFOs are subject to the ELGs found at 40 CFR Part 412.

Part II.A.2 of the Draft Permit includes additional requirements that are applicable to the production area of the CAFO:

The design storage volume must be adequate to contain all manure, litter and process wastewater accumulated during a storage period of 180 days, including:

- The normal precipitation less evaporation during the storage period;
- The normal runoff during the storage period;
- The direct precipitation from a 25-year, 24-hour storm event;
- The runoff from the 25-year, 24-hour storm event from the production area;



- The residual solids after liquid has been removed;
- One-foot freeboard to maintain structural integrity; and
- In the case of treatment lagoons, the necessary minimum treatment volume.

These minimum design storage requirements are adapted from EPA's CAFO technical guidance document *Managing Manure Nutrients at Concentrated Animal Feeding Operations*.<sup>1</sup>

The permit contains provisions for the visual inspection of facilities, including:

- Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage and containment structures. [40 CFR § 412.37(a)(1)(i)]
- Daily inspections of all water lines, including drinking water and cooling water lines. [40 CFR § 412.37(a)(1)(ii)]
- (3) Weekly inspections of the manure, litter, and process wastewater impoundments noting the level as indicated by the depth marker installed in accordance with 40 CFR § 412.37(a)(2). [40 CFR § 412.37(a)(1)(iii)]

The permit also requires:

- Installation of a depth marker in all open surface liquid impoundments which clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. The depth marker need not be a gauge or any formal type of structure; it need only provide immediate visual verification that adequate freeboard remains. [40 CFR § 412.37(a)(2)]
- Correction of any deficiencies that are identified as a result of visual inspections as soon as possible. [40 CFR § 412.37(a)(3)]
- No disposal of animal mortalities in any liquid manure or process wastewater systems and handling of animal mortalities in such a way as to prevent discharge of pollutants to surface water. [40 CFR §§ 122.42(e)(1)(ii) and 412.37(a)(4)]
- Maintenance of complete records for the production area. Records must be maintained on-site at the permitted CAFO for five years from the date they are created. [40 CFR §§ 122.42(e)(2) and 412.37(b)]

### **3. Effluent Limitations and Standards Applicable to the Land Application Area**

Permit provisions for land application of manure, litter or process wastewater under the control of the CAFO owner/operator include both technology-based and water quality-based limits. Provisions 1-8 are technology-based requirements based on BMPs specified in the CAFO regulations, including the ELGs. [40 CFR §§ 122.42(e)(5) and 412.4(c)(1)], and include:

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<sup>1</sup> U.S. EPA, *Managing Manure Nutrients at Concentrated Animal Feeding Operations*, 2004. Chapter 2, Section B.1. EPA-821-B-04-009. <https://www.epa.gov/npdes/managing-manure-nutrients-cafos>

1. Develop and implement a NMP that is based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field. [40 CFR § 412.4(c)(1)]
2. Address the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters. [40 CFR § 412.4(c)(1)]
3. Determine application rates for manure, litter, and process wastewater that minimize phosphorus and nitrogen transport from the field to surface waters in accordance with the University of Idaho Fertilizer Guides<sup>2</sup> or related University of Idaho Crop Production Guide<sup>3</sup>. If a University of Idaho Fertilizer Guide or related Crop Production Guide is unavailable, a fertilizer or production guide from a Pacific Northwest Land Grant University may be used. If a land grant university fertilizer or crop production guide is unavailable, the NMP must identify and include the best available data used to determine specific land application rates for the crop. [40 CFR § 412.4(c)(2)]
4. Identify appropriate site-specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States [40 CFR § 122.42(e)(1)(vi)]
5. Analyze manure and soil a minimum of once annually for nitrogen and phosphorus content. [40 CFR § 412.4(c)(3)]  
Periodically inspect for leaks from equipment used for land application of manure, litter, or process wastewater. [40 CFR § 412.4(c)(4)] Establishment of protocols to land apply manure, litter, and process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater. [40 CFR § 122.42(e)(1)(viii)].
6. Analyze manure and soil a minimum of once annually for nitrogen and phosphorus content. [40 CFR § 412.4(c)(3)]
7. Periodically inspect for leaks from equipment used for land application of manure, litter, or process wastewater. [40 CFR § 412.4(c)(4)]
8. Do not apply manure, litter, or process wastewater closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters. The permittee may opt to use a 35-foot vegetated buffer as an alternative to the 100-foot setback. As a compliance alternative, the permittee may demonstrate to the permitting authority that the use of an alternative practice will result in equivalent or better pollutant reductions than would be achieved by the use of the 100-foot setback. An adequate demonstration must include the use of site-specific data using a credible tool such as INTRA or the Idaho Phosphorus Site Index. [40 CFR §§ 412.4(c)(5) and 412.4(c)(5)(i)]

Provisions 9 and 10 are water quality-based provisions. The rationale for those provisions are explained below.

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<sup>2</sup> University of Idaho, Southern Idaho Fertilizer Guides Publications & Resources, <http://www.extension.uidaho.edu/resources2.aspx?title=Crop%20Production&category1=Fertilizers%20and%20Soil&category2=Southern%20Idaho%20Fertilizer%20Guides>

<sup>3</sup> University of Idaho, Crop Production, <http://www.extension.uidaho.edu/crops.aspx>

9. Prevent dry weather discharges of manure, litter and process wastewater, including discharges to waters of the U.S. through tile drains, ditches or other conveyances, discharges associated with irrigation, as well as discharges via subsurface flows.

Where manure, litter, or process wastewater has been applied in accordance with the CAFO's NMP, a precipitation related discharge of manure, litter, or process wastewater from land areas under the control of the CAFO is considered to be an agricultural storm water discharge. All other discharges from the land application area that are not agricultural storm water discharges are dry weather discharges and are prohibited.

Discharges from CAFO land application area, except where it is an agricultural storm water discharge, are subject to NPDES requirements, including water quality-based effluent limitations. Federal regulations [40 CFR § 122.44(d)] require permit limitations to control all pollutants which may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above and State or Tribal water quality standard. In most instances, a CAFO that meets technology-based permit limits requiring manure to be applied at appropriate agronomic rates will eliminate all or most dry weather discharges. However, if such discharges remain, the Permitting Authority must determine the need for additional water quality-based effluent limitations to meet applicable water quality standards based on the circumstances of each particular case (see the Preamble to the Final Rule, 73 FR 70,418 (November 20, 2008)).

A state-wide general permit must ensure that water quality standards will not be violated by authorized discharges from any facility covered by that permit. A general permit's water quality-based requirements must, therefore, be sufficiently protective to ensure that no authorized discharges anywhere in the State will violate water quality standards (see Water Quality-based Effluent Limitations and Standards – Production Area, above).

EPA has determined that water quality-based effluent limitations are necessary to address dry weather discharges from land application areas that cause or contribute to an excursion above Idaho Water Quality Standards. The draft permit prohibits all dry weather discharge from the land application area to a water of the United States from a CAFO as a result of the application of manure, litter or process wastewater to land areas under the control of the CAFO, except where it is an agricultural storm water discharge. [40 CFR § 122.23(e)]. A dry weather discharge is a discharge of manure, litter, and/or process waste water from the land application area under the control of a CAFO that is not defined as Agricultural Stormwater (40 CFR § 122.23(e)) and where the manure, litter, or process wastewater has not been land applied in accordance with site-specific nutrient management practices that ensure the appropriate utilization of the nutrients in the manure, litter, or process wastewater as specified in 40 CFR § 122.42(e)(1)(vi-ix). The term does not exclude discharges through tile drains, discharges mingled with irrigation water, discharges composed of liquid manure or process wastewater, discharges resulting from the failure of land application equipment, and discharges from furrow or flood irrigation tail water.

10. Do not apply manure, litter or process wastewater when the land is frozen or snow-covered, or when the top two inches of soil are saturated from rainfall, snow melt or irrigation.

EPA has determined that water quality-based effluent limitations are necessary to address discharges from land application areas during winter. The draft Permit prohibits the land application of manure, litter, or process wastewater when the land application area is frozen and/or snow covered or when the top two inches of soil are saturated from rainfall, snow melt, or irrigation.

Not surprisingly, manure, litter and process wastewater cannot be effectively applied at an agronomic rate during the non-growing season, since there will be minimal or no plant uptake. At the same time, frozen, snow-covered or saturated soils will enhance and facilitate runoff. Studies of winter manure application and nutrient losses include assessments using a variety of methods and scales, both spatial and temporal. As Table 1 shows, the majority of these studies observed substantial nutrient losses from winter-applied manure.

<b>Table 1: Summary of research studies on nutrient losses from winter application of manure</b>			
<b>Study</b>	<b>Geographic Location</b>	<b>Manure Type</b>	<b>Loss magnitude and form</b>
<b>Watershed studies</b>			
Bishop, P.L., W.D. Hively, J.R. Stedinger, M.R. Rafferty, J.L. Lojpersberger, and J.A. Bloomfield. 2005. Multivariate analysis of paired watershed data to evaluate agricultural best management practice effects on stream water phosphorus. <i>J. Environ. Qual.</i> 34:1087–1101.	New York	Dairy manure	Paired-watershed model of reduced winter spreading demonstrated load reductions of: 43% Soluble P 29% Particulate P
Brown, M.B., P. Longabucco, M.R. Rafferty, P.D. Robillard, M.F. Walter, and D.A. Haith. 1989. Effects of animal waste control practices on nonpoint source phosphorus loading in the West Branch of the Delaware River watershed. <i>J. Soil Water Cons.</i> 44(1):67-70.	New York	Dairy manure	Model simulations of improved spreading schedules that eliminated winter spreading led to 35% decrease in TP losses
Gessel, P.D., N.C. Hansen, J.F. Moncrief, and M.A. Schmitt. 2004. Rate of Fall-Applied Liquid Swine Manure: Effects on Runoff Transport of Sediment and Phosphorus. <i>J. Environ. Qual.</i> 33:1839-1844.	Minnesota	Swine	Significant increases in DP loss in spring runoff from frozen soil after fall application of swine manure applied at 1x and 2x the recommended rate: • Control: <0.1 kg/ha DP • 1x rate: ~0.2 kg/ha DP • 2x rate: ~0.4 kg/ha DP (Values estimated from Figure 2 in paper.) 18 percent of spring runoff P losses were DP.

<b>Table 1: Summary of research studies on nutrient losses from winter application of manure</b>			
<b>Study</b>	<b>Geographic Location</b>	<b>Manure Type</b>	<b>Loss magnitude and form</b>
Hansen, N.C., S.C. Gupta, J.F. Moncrief. 2000. Snowmelt runoff, sediment, and phosphorus losses under three different tillage systems. <i>Soil Tillage Res.</i> 57:93-100.	Minnesota	Not specified	Soluble P was 75% of total P loss in snowmelt for three tillage systems. (Manure application was not part of the study design. Study included here to illustrate points about proportion of dissolved P in snowmelt.)
Komiskey, M.J., T.D. Stuntebeck, and F.W. Madison. 2011. Nutrients and sediment in frozen-ground runoff from no-till fields receiving liquid-dairy and solid-beef manures. <i>J. Soil Water Cons.</i> 66(5):303-312.	Wisconsin	Dairy (liquid), beef (solid)	DRP comprised 80% of total P losses in runoff frozen ground treated with manure
Lewis, T.W. and J.C. Makarewicz. 2009. Winter application of manure on an agricultural watershed and its impact on downstream nutrient fluxes. <i>J. Grt. Lakes Res.</i> 35(sp1):43-49.	New York	Dairy manure	Banning winter spreading resulted in these changes in event+nonevent mean stream nutrient concentrations: <ul style="list-style-type: none"> <li>• TP 37.6 – 68.7% decrease</li> <li>• SRP 37.9 – 74.9% decrease</li> <li>• TKN 50 – 69.8% decrease</li> </ul>
Owens, L.B., J.V. Bonta, M.J. Shipitalo, and S. Rogers. 2011. Effects of winter manure application in Ohio on the quality of surface runoff. <i>J. Environ. Qual.</i> 40:153–165.	Ohio	Turkey litter, swine manure (liquid)	Following Ohio NRCS criteria for manure application to frozen/snow-covered soils, annual losses in runoff varied widely by watershed and manure characteristics, ranged: TN: 0.0 – 52.4 kg/ha TP: 0.02 – 17.2 kg/ha
Pionke, H.B., W.J. Gburek, R.R. Schnabel, A.N. Sharpley, and G.F. Elwinger. 1999. Seasonal flow, nutrient concentrations and loading patterns in stream flow draining an agricultural hill-land watershed. <i>J. Hydrol.</i> 220:62-73.	Pennsylvania	Not specified	[about seasonal flow and loads, not winter spreading specifically]
Shappell, N.W., L.O. Billey, and M.J. Shipitalo. 2016. Estrogenic activity and nutrient losses in surface runoff after winter manure application to small watersheds. <i>Sci. Total Environ.</i> 543:570-680.	Ohio	Swine, turkey, beef	<ul style="list-style-type: none"> <li>• Forage plots receiving beef manure slurry had no runoff in 2009 and minimal runoff and N losses &lt;3 kg/ha in other years; authors concluded that agronomic rates of manure application to frozen mature grassland with ~10% slope pose little risk of environmental harm from runoff.</li> <li>• Mean TP in runoff from watersheds receiving:               <ul style="list-style-type: none"> <li>○ Swine manure 1.7 – 5.5 mg/L;</li> <li>○ Turkey litter 1.4 – 7.6 mg/L;</li> <li>○ Control (no manure) 0.3 – 0.8 mg/L</li> </ul> </li> </ul>

<b>Table 1: Summary of research studies on nutrient losses from winter application of manure</b>			
<b>Study</b>	<b>Geographic Location</b>	<b>Manure Type</b>	<b>Loss magnitude and form</b>
			<ul style="list-style-type: none"> <li>• Cumulative mass loss (January 1 – April 30, 2009, 2010, 2011) adjusted for loss from controls:               <ul style="list-style-type: none"> <li>○ Swine manure 1.07 – 8.58 kg/ha</li> <li>○ Turkey litter 4.80 kg/ha (2009 only)</li> </ul> </li> <li>• Flow adjusted TP pre-application/post-application:               <ul style="list-style-type: none"> <li>○ Swine manure: 0.86 – 10.15 mg/L</li> <li>○ Turkey litter: 3.68 – 5.79 mg/L</li> </ul> </li> </ul>
Stuntebeck, T.D., M.J. Komiskey, M.C. Peppler, D.W. Owens, and D.R. Frame. 2011. Precipitation-runoff relations and water-quality characteristics at edge-of-field stations, Discovery Farms and Pioneer Farm, Wisconsin, 2003–8: U.S. Geological Survey Scientific Investigations Report 2011–5008, 46 pp.	Wisconsin	Dairy, beef	Not specified [report summarizes results for 6 farms under different management conditions and cautions against using the data to determine whether a particular farming system resulted in higher nutrient yields than another.]
<b>Plot and field studies</b>			
Lorimor, J.C. 1996. Fate of nutrients from liquid swine manure land-applied in the winter. Ph.D. Thesis, Iowa State Univ., <i>Retrospective Theses and Dissertations</i> . Paper 11163.	Iowa	Swine (liquid)	<p>Over two years of late winter application on snow:</p> <ul style="list-style-type: none"> <li>• [TKN] 116.2 – 1086.0 mg/L</li> <li>• Average N losses: 46.0 kg/ha from corn stubble, 21.6 kg/ha from soybean stubble</li> <li>• Average N loss 22% of applied (highest year 43% of applied)</li> <li>• Average P losses: 21.6 kg/ha from corn stubble, 2.3 kg/ha from soybean stubble</li> <li>• Average P loss 29% of applied (highest year 36% of applied)</li> <li>• Applied N and P loss of 1% in spring broadcast of swine manure</li> </ul>
<b>Laboratory Studies</b>			
Williams, M.R., G.W. Feyereisen, D.B. Beegle, R.D. Shannon, G.J. Folmar, and R.B. Bryant. 2011. Manure application under winter conditions: nutrient runoff and leaching losses. <i>Trans. ASABE</i> 54(3):891-899.	Pennsylvania	Dairy	<p>After manure application, N and P concentrations in snowmelt runoff 6-140 times higher than control:</p> <ul style="list-style-type: none"> <li>• Snow-covered control               <ul style="list-style-type: none"> <li>○ TN 2.5 ug/L</li> <li>○ TP 1.4 ug/L</li> </ul> </li> <li>• Manure on top of snow               <ul style="list-style-type: none"> <li>○ TN 276 ug/L</li> <li>○ TP 11.8 ug/L</li> </ul> </li> <li>• Manure between snow               <ul style="list-style-type: none"> <li>○ TN 285 ug/L</li> </ul> </li> </ul>

<b>Table 1: Summary of research studies on nutrient losses from winter application of manure</b>			
<b>Study</b>	<b>Geographic Location</b>	<b>Manure Type</b>	<b>Loss magnitude and form</b>
			<ul style="list-style-type: none"> <li>○ TP 10.6 ug/L</li> <li>● Manure under snow               <ul style="list-style-type: none"> <li>○ TN 362 ug/L</li> <li>○ TP 8.7 ug/L</li> </ul> </li> </ul> <p>After manure application, N and P loads in snowmelt runoff 3 – 100 times higher than control:</p> <ul style="list-style-type: none"> <li>● Snow-covered control               <ul style="list-style-type: none"> <li>○ TN 3.6 ug/cm<sup>2</sup></li> <li>○ TP 2.2 ug/cm<sup>2</sup></li> </ul> </li> <li>● Manure on top of snow               <ul style="list-style-type: none"> <li>○ TN 254 ug/cm<sup>2</sup></li> <li>○ TP 10.9 ug/cm<sup>2</sup></li> </ul> </li> <li>● Manure between snow               <ul style="list-style-type: none"> <li>○ TN 231 ug/cm<sup>2</sup></li> <li>○ TP 8.5 ug/cm<sup>2</sup></li> </ul> </li> <li>● Manure under snow               <ul style="list-style-type: none"> <li>○ TN 362 ug/cm<sup>2</sup></li> <li>○ TP 9.1 ug/cm<sup>2</sup></li> </ul> </li> </ul> <p>Manure on frozen soil treatment had the largest concentrations and losses of N and P during rainfall simulations compared to other treatments:</p> <ul style="list-style-type: none"> <li>● TN 107 mg/L; 39 ug/cm<sup>2</sup></li> <li>● TP 11.5 mg/L; 4 ug/cm<sup>2</sup></li> </ul>

Nutrients lost in soluble forms represent the greatest potential impact on water quality from manure applied to frozen and snow-covered ground because soluble nutrients are readily available to support biological growth and eutrophication. Nearly all researchers who report increased nutrient runoff following winter application report much higher levels of soluble nutrients, compared to particulate forms. Hansen et al. (2000) reported that snowmelt tends to contain higher proportions of dissolved P than rainfall-generated runoff because of reduced detachment of soil particles from frozen soil. Gessel et al. (2004) noted significant increases in dissolved P losses (0.2 – 0.4 kg/ha) in spring runoff from frozen soil after fall application of swine manure, compared to reduced runoff and P losses in summer runoff from similarly treated plots. On average, 18 percent of spring runoff P losses were in the dissolved form. Komiskey et al. (2011) reported that on average, dissolved P accounted for more than 80 percent of all P measured in runoff from several Wisconsin crop fields during frozen-ground periods. Lewis and Makarewicz (2009) reported that a short-term application of manure to a snow-covered landscape resulted in immediate increases of dissolved fractions including SRP (greater than 200 ug/L increase) and NO<sub>3</sub>-N (greater than 4 mg/L increase) for approximately 1 week after the application of manure, while the particulate fraction TSS did not increase in the downstream system. Except immediately after application of manure, the increase in the amount of P being lost from the sub-watershed was due to the dissolved fraction of P rather than the particulate

fraction as SRP represented 91.7 percent of the TP concentration. (Values are estimated from Figure 4 in the paper.)

The most recent research using either plot or field studies was performed at the University of Iowa. This study reported mass losses of nitrogen up to 43 percent and phosphorus up to 36 percent. This study also reported extremely high N runoff concentrations of up to 1086.0 mg total Kjeldahl nitrogen (TKN)/L (Lorimor, 1996). The same study also reported just 1 percent losses of N and P applied in spring broadcast of swine manure. Earlier studies report similar results, although it is not clear that these studies reflect the influence of contemporary cropping systems and nutrient management practices.

Williams et al. (2011) conducted a lysimeter study with simulated snowfall and rainfall to evaluate the influence of winter-spread manure position within a snowpack on nutrient runoff from a snowmelt or rainfall event. The authors reported that snowmelt behavior and N and P losses in surface runoff and subsurface leachate vary depending on the manure's location with respect to snow. Applying manure prior to, during, or after a snowfall event increased the concentrations and losses of N and P in snowmelt runoff and may decrease infiltration in subsequent rainfall events, resulting in higher concentrations and losses of both N and P in runoff. Applying manure on top of the snow reduced the amount of NH<sub>4</sub>-N losses, but increased the losses of organic N, DRP, and total P to surface runoff during a snowmelt event. The authors suggested that if methods were developed to “incorporate” manure into the middle of a snowpack, the risk of environmental degradation from winter manure application might be reduced compared to placing manure above or below the snowpack.

Studies that specifically addressed the effectiveness of BMPs for winter application of manure demonstrated that although some performed better than others, none adequately controlled nutrient runoff.<sup>4</sup> While other BMP-focused studies exist that did not specifically measure the

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<sup>4</sup> Kongoli, C.E. and W.L. Bland. 2002. Influence of manure application on surface energy and snow cover. *J. Environ. Qual.* 31:1166–1173.

Schillinger, W.F. and D.E. Wilkins. 1997. Deep ripping fall-planted wheat after fallow to improve infiltration and reduce erosion. *J. Soil. Water Cons.* 52:198-202.

Pikul, J.L., Jr., D.E. Wilkins, J.K. Aase, and J.F. Zuzel. 1996. Contour ripping: A tillage strategy to improve water infiltration into frozen soil. *J. Soil Water Cons.* 51:76-83.

Lorimor, J.C. and J.C. Melvin. 1996. Nitrogen losses in surface runoff from winter-applied manure. University of Iowa. Final Report.

Fleming, R. and H. Fraser. 2000. Impacts of Winter Spreading of Manure on Water Quality - Literature Review. University of Guelph, Report prepared for Ontario Pork, Etobicoke, ON, Canada.

Ulen, B. 2003. Concentrations and transport of different forms of phosphorus during snowmelt runoff from an illite clay soil. *Hydrol. Proc.* 17:747-758.

Fallow, D.J., D.M. Brown, J.D. Lauzon, and G.W. Parkin. 2007. Risk assessment of unsuitable winter conditions for manure and nutrient application across Ontario. *J. Environ. Qual.* 36:31–43



winter performance of BMPs, the runoff concentrations and loadings from winter application activities generally indicate that commonly deployed BMPs that may be effective during the growing season are not sufficient during the winter or during spring runoff.

In a New York dairy watershed, Lewis and Makarewic<sup>5</sup> (2009) concluded that a winter spreading ban yielded 60-69 percent in-stream reductions in average TP concentrations, 68-75 percent reductions in soluble P concentrations and 50-70 percent reductions in TKN levels during the winter months.

Gilley et al.<sup>6</sup> (2002) recommended that to reduce the loss of nutrients and minimize environmental concerns, the period just before planting is the ideal time to apply manure to croplands. For forage systems, manure should be added immediately after each harvest or grazing cycle. Management flexibility is improved when multiple crop types allow more-frequent manure application periods.

Nolan et al.<sup>7</sup> (undated) noted that research results that evaluate the effectiveness of BMPs for the control of snowmelt runoff are difficult to assess due to limited data, and to differences among sites, in prior management practices and in climatic conditions. The effectiveness of applying a BMP or combination of BMPs will also vary according to site-specific conditions. The authors concluded that it is likely that the most effective BMPs to reduce the risk of P losses would be to eliminate the spreading of manure on frozen or snow-covered soil, and to relocate livestock wintering sites.

The weight of scientific evidence clearly demonstrates high risks of runoff from winter manure application and relative ineffectiveness of BMPs in curtailing that risk. Therefore, EPA has determined that the only measure adequately protective of water quality is to prohibit land application of manure, litter and process wastewater on frozen, snow-covered and saturated soils.

#### **4. Effluent Limitations and Standards Applicable to Discharges to Impaired Waters**

Federal regulations [40 CFR § 122.44(d)] require permit limitations to control all pollutants which may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard. Water quality-based requirements in the general permit must be sufficiently protective to ensure that no authorized discharges will violate State water quality standards. EPA may impose additional water quality-based limitations on a site-specific basis, or require the facility to obtain an individual permit, if information in a facility's NOI, required reports, or other sources indicates that the facility's discharges are not controlled as necessary to meet applicable water quality standards.

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<sup>5</sup> Lewis, T.W. and J.C. Makarewicz. 2009. Winter application of manure on an agricultural watershed and its impact on downstream nutrient fluxes. *J. Grt. Lakes Res.* 35(sp1):43-49.

<sup>6</sup> Gilley, J.E., L.M. Risse, and B. Eghball. 2002. Managing runoff after manure application. *J. Soil Water Cons.* 57(6):530-533.

<sup>7</sup> Nolan, S., L. Good, P. Loro, J. Elliot, T. Wallace, and B. Olson. Undated. Best Management Practices for Snowmelt Runoff. Alberta Agriculture and Rural Development. Edmonton, AB.

In situations where technology-based effluent limitations are not sufficient to meet water quality standards, the permitting authority must develop more stringent water quality-based effluent limitations on a site- specific basis. NPDES permits may include BMPs as water quality-based effluent limitations where numeric limits are infeasible or where the use of BMPs is reasonably necessary to meet water quality- based effluent limitations [40 CFR § 122.44(k)(3) and (4)].

For impaired waters with an EPA approved TMDL, permit provisions must be consistent with the assumptions and requirements of any available WLA [40 CFR § 122.44(d)(vii)(B)]. For impaired waters without an EPA approved or established TMDL, additional requirements must be consistent with water quality standards. Owners/operators of CAFOs that discharge to an impaired water, with or without a TMDL, must implement and maintain any control measures or conditions required by the permit, and include these control measures or conditions in the NMP.

IDEQ has developed, and EPA has approved, 75 TMDLs for Idaho waterbodies for pollutants commonly associated with CAFO discharges, i.e., nutrients and bacteria (see Table 2).

<b>#</b>	<b>Major Basin</b>	<b>Subbasins</b>	<b>TMDL</b>	<b>Issued</b>	<b>Pollutant(s)</b>
1.	Bear River	Bear Lake, Central Bear, Lower Bear-Malad, Middle Bear	Bear River/Malad River Subbasin Assessment and TMDL Plan	June 29, 2006	Total P, Total N, E. coli
2.	Bear River	Bear Lake, Central Bear, Lower Bear-Mald, Middle Bear	Bear River Malad Subbasin TMDL Addendum	September 13, 2013	Total P
3.	Clearwater	Clearwater	Hatwai Creek Subbasin Assessment and TMDLs	December 28, 2010	E. coli, Total P
4.	Clearwater	Clearwater	Jim Ford Creek	June 6, 2000	Fecal coliform, Nutr/Eutr
5.	Clearwater	Clearwater	Lindsay Creek Watershed TMDL	June 26, 2007	E. coli, Nutr/Eutr
6.	Clearwater	Clearwater	Potlatch River TMDLs	February 13, 2009	E. coli, Nutri/Eutr, Total N
7.	Clearwater	Clearwater	Winchester Lake	March 22, 1999	D.O., Fecal coliform, Nutr/Eutr
8.	Clearwater	Lower North Fork, Clearwater	Clearwater River Subbasin, Lower North Fork	January 15, 2003	E. coli

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9.	Clearwater	Palouseho	Cow Creek Subbasin TMDL	February 13, 2006	Nutr/Eutr
10.	Clearwater	Palouse	Palouse River (South Fork) TMDL	October 1, 2007	E. coli, Nutr/Eutr
11.	Clearwater	Palouse	Palouse River Subbasin TMDL	March 14, 2005	E. coli, Nutr/Eutr
12.	Clearwater	Palouse	Paradise Creek	February 12, 1998	E. coli, Fecal coliform, NH3, Nutr/Eutr
13.	Clearwater	South Fork Clearwater	Clearwater River (South Fork) TMDL	July 22, 2004	E. coli, D.O., Nutr/Eutr
14.	Clearwater	South Fork Clearwater	Clearwater River, South Fork (Nez Perce Reservation Lanes) TMDL	July 22, 2004	E. coli, D.O., Nutr/Eutr
15.	Clearwater	South Fork Clearwater	Cottonwood Creek	June 6, 2000	NH3, D.O., fecal coliform, Nutr/Eutr
16.	Panhandle	Coeur d'Alene Lake	Black Lake Nutrients TMDL	August 31, 2011	Total P
17.	Panhandle	Coeur d'Alene Lake	Coeur D'Alene Lake and River Subbasin	July 14, 2000	Fecal coliform
18.	Panhandle	Coeur d'Alene Lake	Fernan Lake TMDL (Coeur D'Alene Lake and River 2013 Addendum)	November 6, 2013	Total P
19.	Panhandle	Hangman	Upper Hangman Creek Assessment and TMDLs	August 29, 2007	E. coli
20.	Panhandle	Pend Oreille Lake	Clark Fork/Pend Oreille Basin	April 2, 2001	D.O., Total P
21.	Panhandle	Pend Oreille Lake	Lake Pend Oreille	October 8, 2002	Total P
22.	Panhandle	Pend Oreille Lake	Pack River Nutrients TMDLs	December 31, 2008	Total P
23.	Panhandle	Upper Spokane	Fish Creek Temperature,	June 5, 2008	E. coli

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			Sediment and Bacteria TMDLs		
24.	Panhandle	Upper Spokane	Spokane, Upper	January 31, 2001	Total P
25.	Salmon	Hells Canyon, Lower Salmon	Lower Salmon River and Hells Canyon Tributaries TMDLs	February 9, 2010	E. coli
26.	Salmon	Lemhi	Lemhi	March 14, 2000	E. coli, Fecal coliform
27.	Salmon	Lemhi	Lemhi Subbasin TMDLs	February 27, 2013	E. coli
28.	Salmon	Little Salmon	Little Salmon River Subbasin	March 29, 2006	E. coli, Total P
29.	Salmon	Little Salmon	Little Salmon River Subbasin TMDL Addendum	April 10, 2013	E. coli
30.	Salmon	Lower Snake-Asotin	Tammany Creek Watershed TMDL Addendum	December 17, 2010	Total P, E. coli
31.	Salmon	Middle Salmon-Panther	Salmon River, Middle/Panther Creek	July 2, 2001	Total P
32.	Salmon	Pahsimeroi	Pahsimeroi River Addendum 2013 TMDL	April 10, 2014	E. coli
33.	Southwest	Boise-Mores	Boise-Mores Creek TMDLs	February 18, 2010	E. coli
34.	Southwest	Brownlee Reservoir	Brownlee Reservoir - Weiser Flat	September 30, 2003	Total P
35.	Southwest	Brownlee Reservoir, Middle Snake-Payette	Snake River - Hells Canyon TMDL	March 1, 2004	Total P, D.O.
36.	Southwest	Brownlee Reservoir, Middle Snake-Payette	Snake River Hells Canyon TMDL	September 9, 2004	Total P
37.	Southwest	Bruneau	Bruneau River Subbasin	March 13, 2001	Total P, E. coli, D.O.

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38.	Southwest	Bruneau	Jacks Creek TMDL (Modification)	November 13, 2007	Total P
39.	Southwest	Bruneau, C.J. Strike Reservoir	King Hill - CJ Strike Reservoir Subbasin Assessment and TMDL	June 21, 2006	D.O., Total P
40.	Southwest	Lower Boise	Boise River, Lower	January 25, 2000	Fecal coliform
41.	Southwest	Lower Boise	Lake Lowell TMDL (Addendum to Lower Boise River Subbasin)	December 6, 2010	Total P
42.	Southwest	Lower Boise	Lower Boise River Sediment and Bacteria TMDLs Addendum	June 3, 2008	Fecal coliform
43.	Southwest	Lower Boise	Lower Boise River TMDL	September 18, 2015	E. coli
44.	Southwest	Lower Boise	Lower Boise River TMDL Total Phosphorus TMDL (2015 Addendum)	December 22, 2015	Total P
45.	Southwest	Middle Snake-Succor	Snake River - Middle/Succor Creek	January 5, 2004	E. coli, Total P, Fecal coliform, Nutr/Eutr
46.	Southwest	North Fork Payette	Cascade Reservoir - Part I	May 13, 1996	Total P
47.	Southwest	North Fork Payette	Cascade Reservoir - Part II	April 19, 1999	Total P
48.	Southwest	Payette	Bissel Creek	October 24, 2003	E. coli
49.	Southwest	Payette	Lower Payette River TMDL 2013 Addendum (Little Willow Creek)	December 11, 2013	E. coli
50.	Southwest	Payette	Payette River, Lower	May 31, 2000	E. coli

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51.	Southwest	Weiser	Weiser River Watershed Subbasin TMDL	January 19, 2007	E. coli, Fecal coliform
52.	Upper Snake	American Falls, Blackfoot, Lake Walcott, Portneuf	American Falls Subbasin TMDL	August 6, 2012	Phosphorus
53.	Upper Snake	Big Lost	Big Lost River TMDL (Revised and Updated)	December 14, 2011	E. coli
54.	Upper Snake	Big Wood	Big Wood River TMDL Revision	February 9, 2012	E. coli
55.	Upper Snake	Big Wood	Big Wood River Watershed	May 15, 2002	Total P, E. coli
56.	Upper Snake	Blackfoot	Blackfoot River	April 3, 2002	Nutr/Eutr
57.	Upper Snake	Blackfoot	Blackfoot River Subbasin TMDL (2013 Addendum)	July 26, 2013	E. coli
58.	Upper Snake	Camas	Camas Creek Subbasin TMDL	September 30, 2005	Total P, E. coli
59.	Upper Snake	Goose	Goose Creek TMDL	July 25, 2004	E. coli, D.O., Total P
60.	Upper Snake	Goose, Lake Walcott	Lake Walcott	June 27, 2000	Total P
61.	Upper Snake	Lake Walcott	Lake Walcott TMDL (Marsh Creek) 2013 Addendum	January 23, 2015	E. coli
62.	Upper Snake	Little Wood	Little Wood River Subbasin TMDL	September 30, 2005	Total P, E. coli
63.	Upper Snake	Lower Henrys	Upper and Lower Henry Fork TMDLs	August 17, 2010	E. coli
64.	Upper Snake	Lower Henrys, Teton	Teton River Subbasin	February 24, 2003	Total P
65.	Upper Snake	Palisades	Palisades Subbasin TMDL Addendum	February 10, 2014	E. coli
66.	Upper Snake	Portneuf	Portneuf River	April 16, 2001	Total P, Total N, Fecal coliform

67.	Upper Snake	Portneuf	Portneuf River TMDL	July 29, 2010	E. coli, Total N, Total P
68.	Upper Snake	Raft	Raft River Watershed TMDL	July 27, 2004	Total P, E. coli
69.	Upper Snake	Salmon Falls	Salmon Falls Creek Subbasin TMDLs	February 27, 2008	Total P, Total N, E. coli
70.	Upper Snake	Salmon Falls, Upper Snake-Rock	Snake-Rock, Upper	August 25, 2000	Total P, Fecal coliform
71.	Upper Snake	Teton	Teton River TMDL	September 26, 2003	Total P
72.	Upper Snake	Upper Snake - Rock	Billingsley Creek	August 23, 1993	Total P
73.	Upper Snake	Upper Snake-Rock	Snake River Watershed, Middle	April 25, 1997	Total P
74.	Upper Snake	Upper Snake-Rock	Upper Snake Rock TMDL (Modification)	September 14, 2005	Total P
75.	Upper Snake	Willow	Willow Creek TMDL	June 30, 2004	Total P, Nutr/Eutr

None of Idaho's TMDLs assign specific WLAs to CAFOs. Most of these TMDLs do not directly address loads from animal agriculture. When they are noted, they are included generally as nonpoint source contributions to be addressed through implementation plans for agriculture. One TMDL, *American Falls Subbasin Total Maximum Daily Load Plan: Subbasin Assessment and Loading Analysis* (IDEQ, May 2012) identifies 5 CAFOs as point sources, but does not assign specific wasteload allocations to those discharges. From a pollution abatement standpoint it is clear that the TMDL writers considered the standard elements of the CAFO permitting program adequate to control pollutant discharges from CAFOs. Therefore, in order to be consistent with the requirements and assumptions of these TMDLs, the EPA has determined that compliance with the terms and conditions of this permit meets the obligations of the relevant TMDLs and the EPA is not requiring additional controls on nutrient and bacteria sources at CAFOs that have not been assigned operation-specific WLAs.

### **III. SPECIAL CONDITIONS**

#### **A. Nutrient Management Plan**

The CAFO operator/owner must develop, submit and implement a Nutrient Management Plan (NMP) [40 CFR §§ 122.42(e)(5) and 412.4(c)(1)]. The NMP shall identify and describe practices

that will be implemented to ensure compliance with the effluent limitations and other provisions of this permit.

1. Schedule

CAFOs seeking permit coverage under the permit must submit the completed NMP to EPA with the NOI. The permittee shall implement its NMP upon authorization under the permit [40 CFR § 122.23(h)].

2. NMP Content

The draft permit specifies that each NMP must include site-specific practices and procedures necessary to implement the applicable effluent limitations and standards. In addition, each NMP must meet nine minimum measures required under 40 CFR § 122.42(e)(1)(i-ix), and specified in the permit. These requirements include the following:

- a. Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities. Each wastewater or manure storage structure must be designed, constructed, operated and maintained in accordance with the requirements specified in Section II.A.1 of the permit.
  - i. Each wastewater or manure storage structure must be evaluated using the Idaho Animal Waste Management (IDAWM) Software, Version 4, December 2000 (Appendix C). If the evaluation determines that the existing wastewater or manure storage structures have a storage capacity less than the minimum capacity specified in Section II.A.1, the NMP must include measures that the CAFO will take to ensure that the storage capacity is increased and that interim measures are implemented to prevent negative consequences of having inadequate, or inadequately designed storage. The results of the evaluation must be included with the NMP.
  - ii. The CAFO covered by this permit must ensure the proper operation and maintenance of wastewater and manure storage structures by completing the Washington NRCS Engineering Technical Note #23, NRCS Assessment Procedure for Existing Waste Storage Ponds<sup>8</sup> (Appendix D), for each wastewater or manure storage structure. If the evaluation of the CAFO's wastewater or manure storage structures identifies deficiencies in the operation or maintenance of the structures, the CAFO must identify measures to address those deficiencies in its NMP. The NMP must include the results of the evaluation [40 CFR § 122.42(e)(1)(i)].
- b. Ensure proper management of mortalities (i.e., dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities. Mortality handling activities must comply with all applicable Federal, State and local regulatory

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<sup>8</sup> USDA, Natural Resources Conservation Service, Spokane, Washington, NRCS Assessment Procedure for Existing Waste Storage Ponds, Engineering Note #23, January 2013. <https://ecology.wa.gov/DOE/files/a0/a0a6c01a-af2c-428b-83ba-a30f10d8e643.pdf>



- requirements. Both typical and catastrophic mortality handling procedures should be detailed in the NMP, as stipulated in the permit [40 CFR § 122.42(e)(1)(ii)].
- c. Ensure that clean water is diverted, as appropriate, from the production area. The NMP must identify the necessary structures and controls to exclude clean water from the production area, and the necessary operation and maintenance requirements for those controls. All water that comes into contact with any polluting materials must be directed to storage or treatment structures and accounted for in the sizing and management of those structures [40 CFR § 122.42(e)(1)(iii)].
  - d. Prevent the direct contact of animals confined or stabled at the facility with waters of the United States [40 CFR § 122.42(e)(1)(iv)].
  - e. Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals or contaminants. The NMP must include the appropriate storage, handling and disposal practices for these materials [40 CFR § 122.42(e)(1)(v)].
  - f. Identify appropriate site-specific conservation practices to be implemented, including as appropriate buffers or equivalent practices as stipulated in Section III.A.2.f to control runoff of pollutants to waters of the United States. Each land application area must be evaluated using the Idaho NRCS Water Quality Technical Note #6, Idaho Nutrient Transport Risk Assessment<sup>9</sup> (INTRA) (Appendix E), and include the results of the evaluation in the NMP. Dairies may opt to utilize the Idaho Phosphorus Site Index<sup>10</sup> in lieu of INTRA. The NMP must identify all land application areas with a Medium or High risk assessment rating and identify the appropriate conservation practices required to reduce the risk assessment of each land application area to a Low risk assessment rating. The NMP must include a schedule of implementation for the site-specific conservation practices and provisions on the proper operation and maintenance if those site-specific conservation practices have been implemented in accordance with NRCS conservation practice standards, or other standards as identified in this permit or in the NMP with adequate information and citations for EPA to adequately review [40 CFR § 122.42(e)(1)(vi)].
  - g. The permit identifies protocols for the appropriate testing of manure, litter, process wastewater and soil on an annual basis.
    - i. Manure, litter, or process wastewater must be analyzed in accordance with the University of Idaho Manure and Wastewater Sampling, CIS 1139<sup>11</sup>.

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<sup>9</sup> USDA, Natural Resources Conservation Service, Boise, Idaho, Technical Note Water Quality No. 6, *Idaho Nutrient Transport Risk Assessment (INTRA)*, 2006.  
[https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs144p2\\_045218.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_045218.pdf)

<sup>10</sup> USDA, The Phosphorus Site Index: A Systematic Approach to Assess the Risk of Nonpoint Source Pollution of Idaho Waters by Agricultural Phosphorus, 2017. <https://agri.idaho.gov/main/wp-content/uploads/2018/01/Phosphorus-Site-Index-reference-2017-revised.pdf>

<sup>11</sup> Sheffield, R.E. and R.J. Norell, *Manure and Wastewater Sampling*, CIS 1139, University of Idaho, 2007.  
<http://www.cals.uidaho.edu/edcomm/pdf/cis/cis1139.pdf>

- ii. Soil samples, from each field that will be used to land apply, must be analyzed in accordance with the University of Idaho Bulletin 704, Soil Sampling<sup>12</sup>. Manure, litter, or process wastewater must be analyzed for nitrogen and phosphorus content and at a minimum, soil must be analyzed for pH, soil organic matter, Nitrate-Nitrogen (NO<sub>3</sub>-N), Ammonium-Nitrate (NH<sub>4</sub>-N), and phosphorus (P). All analyses must be used in determining application rates for manure, litter and process wastewater [40 CFR § 122.42(e)(1)(vii)].
  - iii. All analyses must be conducted by a laboratory certified by the North American Proficiency Testing Program.<sup>13</sup>
- h. Establish protocols to land apply manure, litter, or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater. Each permittee must develop land application rates for each land application area where manure, litter, or process wastewater is applied. The land application rates must be developed in accordance with the University of Idaho Fertilizer Guides or related University of Idaho Crop Production Guide. If a University of Idaho Fertilizer Guide or Crop Production Guide is unavailable, a fertilizer or crop production guide from a Pacific Northwest Land Grant University may be used instead (i.e., Oregon State University, Washington State University). If no fertilizer guides or crop production guides are available, the NMP must identify and use the best data available to determine land application rates for each land application area. The NMP must express land application rates in pounds per acre, and volume of manure, litter, or process wastewater in tons, gallons, or cubic feet [40 CFR § 122.42(e)(1)(viii)].

The land application requirements stipulated in Sections II.B.1, II.B.2, III.A.2.g, II.A.2.h, and Appendices C, E and I represent the narrative rate approach [40 CFR § 122.42(e)(5)(ii)]. EPA has identified spreadsheets (Idaho's NRCS IDAWM, Appendix C and Idaho's NRCS Water Quality Technical Note #6, Appendix E) that incorporate many of the required elements, and should simplify the nutrient management planning process for operators.

- i. Identify and maintain site specific records to document the implementation and management of the minimum elements described in Sections III.A.2.a-h and in compliance with the permit [40 CFR § 122.42(e)(1)(ix)].

### 3. Signatory

The NMP shall be signed by the owner/operator or other signatory authority in accordance with Section V.C.5 (Signatory Requirements) of the draft permit [40 CFR § 122.41(k)].

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<sup>12</sup> Mahler, R.L. and T.A. Tindall, Soil Sampling, Bulletin 704 (revised), University of Idaho Cooperative Extension System, (no date). <http://www.cals.uidaho.edu/edComm/pdf/EXT/EXT0704.pdf>

<sup>13</sup> The North American Proficiency Testing Program (NAPT), Soil Science Society of America. <http://naptprogram.org/>

4. NMP Availability

A current copy of the NMP shall be kept on-site at the permitted facility in accordance with Section IV.A.1 and Section IV.A.2 of the Draft permit and provided to the permitting authority upon request [40 CFR § 412.37(c)].

5. Changes to the NMP

- a. The draft permit recognizes that a CAFO owner or operator may need to make changes to its NMP. When a CAFO owner or operator covered by the permit makes changes to the CAFO's NMP previously submitted to EPA, the CAFO owner or operator must provide EPA with the most current version of the CAFO's NMP and identify changes from the previous version; [40 CFR § 122.42(e)(6)(i)]
- b. EPA will review the revised NMP. If EPA determines that the changes to the NMP require revision of the terms of the NMP incorporated into the permit, EPA must then determine whether such changes are substantial [40 CFR 122.42(e)(6)(ii)]. Substantial changes to the terms of a NMP incorporated as terms and conditions of a permit include, but are not limited to [40 CFR § 122.42(e)(6)(iii)]:
  - i. Addition of new land application areas not previously included in the CAFO's NMP, except that if the added land application area is covered by the terms of a NMP incorporated into an existing NPDES permit and the permittee complies with such terms when applying manure, litter, and process wastewater to the added land [40 CFR § 122.42(e)(6)(iii)(A)];
  - ii. Changes to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop [40 CFR § 122.42(e)(6)(iii)(B)];
  - iii. Addition of any crop or other uses not included in the terms of the CAFO's NMP and corresponding field-specific rates of application; and [40 CFR § 122.42(e)(6)(iii)(C)]
  - iv. Changes to site specific components of the CAFO's NMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the U.S [40 CFR §122.42(e)(6)(iii)(D)].
- c. If the changes to the terms of the NMP are not substantial, EPA will include the revised NMP in the permit record, revise the terms of the permit based on the site specific NMP, and notify the permittee and the public of any changes to the terms of the permit based on revisions to the NMP [40 CFR § 122.42(e)(6)(ii)(A)].
- d. If EPA determines that the changes to the terms of the NMP are substantial, EPA will notify the public, make the proposed changes and make the information submitted by the CAFO owner or operator available for public review and comment, and respond to all significant comments received during the comment period. The process for public comments, hearing requests and the hearing process if a hearing is held will follow the procedures set forth in 40 CFR 124.11 through 124.13. EPA may require the permittee to further revise the NMP, if necessary. Once EPA incorporates the revised terms of the

NMP into the permit, EPA will notify the permittee of the revised terms and conditions of the permit [40 CFR § 122.42(e)(6)(ii)(B)].

**B. Lagoon Liner Requirements**

The draft permit requires CAFOs constructing new wastewater or manure storage structures or modifying existing wastewater or manure storage structures must have a liner that is constructed and maintained in accordance with Idaho NRCS standards. Any damage to the wastewater or manure storage structure liner must be evaluated by a Professional Engineer and corrected within thirty (30) days. This includes corrections made pursuant to an evaluation that discovers deficiencies in the integrity of the liner. All documentation of wastewater or manure storage structure liner maintenance must be kept onsite with the NMP. This provision was in the 2012 General Permit and is carried forward in the draft permit.

**C. Facility Closure**

The draft permit contains conditions that CAFOs must follow specific conditions for the closure of lagoons and other earthen or synthetically lined basins and other wastewater or manure storage structures.

Under the draft permit, no such facilities may be abandoned and each must be properly closed as promptly as practicable upon ceasing operation. In addition, any lagoon or other earthen or synthetic lined basin that is not in use for a period of twelve consecutive months must be properly closed unless the facility is financially viable, intends to resume use of the structure at a later date, and either: (1) maintains the structure as though it were actively in use, to prevent compromise of structural integrity; or (2) removes manure and wastewater to a depth of one foot or less and refills the structure with clean water to preserve the integrity of the synthetic or earthen liner. In either case, the permittee must notify EPA of the action taken, and must conduct routine inspections, maintenance, and record keeping as though the structure were in use. Prior to restoration of use of the structure, the permittee shall notify EPA and provide the opportunity for inspection.

All closure of lagoons and other earthen or synthetic lined basins must be consistent with Idaho Natural Resource Conservation Service Practice Standard Code 360 (Closure of Waste Impoundments). Consistent with this standard the permittee must remove all waste materials to the maximum extent practicable and dispose of them in accordance with the permittee's nutrient management plan, unless otherwise authorized by EPA.

Closure of all other manure, litter, or process wastewater storage and handling structures must occur as promptly as practicable after the permittee has ceased to operate, or, if the permittee has not ceased to operate, within 12 months after the date on which the use of the structure ceased. To close a manure, litter, or process wastewater storage and handling structure, the permittee must remove all manure, litter, or process wastewater and dispose of it in accordance with the permittee's nutrient management plan, or document its transfer from the permitted facility in accordance with off-site transfer requirements specified in Section III.D of the draft permit, unless otherwise authorized by EPA [40

CFR § 122.23(h)].

**D. Requirements for the Transfer of Manure, Litter, and Process Wastewater**

Under the draft permit, where CAFO-generated manure, litter, or process wastewater is sold or given away the permittee must comply with specific requirements that document the transaction and promote proper management. These include the following conditions:

- a. Maintain records showing the date and amount of manure, litter, and/or process wastewater that leaves the permitted operation;
- b. Record of the name and address of the recipient;
- c. Provide the recipient(s) with representative information on the nutrient content of the manure, litter, and/or process wastewater analyzed in accordance with Section III.A.2.g.i of the Draft permit; and
- d. Retain the records on-site, for a period of five years, and submit the records to EPA upon request [40 CFR § 122.42(e)(3)].

**IV. RECORDS, REPORTING, MONITORING AND NOTIFICATION**

**A. Records Management**

The draft permit requires the permittee to maintain records to demonstrate compliance and implementation of Sections II.A, II.B, and III.A of the draft permit. [40 CFR § 122.42(e)(2) and (3); 40 CFR § 412.37(b) and (c)]

**B. Annual Reporting Requirements**

Under the draft permit, the permittee must submit an annual report by March 1st of each year. Two milestones will occur during this permit term that will affect annual reporting:

1. IDEQ will assume authority for general permits, including this July 1, 2020. At that point in time, all documentation required by the permit must be provided to IDEQ rather than to EPA.
2. In addition, consistent with the electronic reporting requirements that go into effect on December 21, 2020 (40 CFR § 127), any reports submitted after that time must be submitted electronically. On October 22, 2015, EPA finalized a rulemaking that modernizes Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires regulated entities and state and federal regulators to use existing, available information technology to report data required by the NPDES permit program electronically instead of filing written paper reports. The permittee must sign and certify all electronic submissions in accordance with the requirements of Section V.C.5 of this permit (Signatory Requirements).

For both of these reasons, i.e., transition of permit authority to IDEQ and implementation of e-

reporting, beginning with the annual report due by March 1, 2021, annual reports must be submitted to IDEQ electronically. Both before and after these transitions annual reports must also be submitted to ISDA.

The permittee may seek an electronic reporting waiver by submitting a request. Prior to July 1, 2020 this request should be submitted to EPA. Beginning July 1, 2020 this request should be submitted to IDEQ. This waiver request should contain the following details: facility name; NPDES permit number; facility address; name, address and contact information for the owner, operator, or duly authorized facility representative; and a brief written statement regarding the basis for claiming such a temporary waiver.

The request for the electronic reporting waiver will be either approved or denied within 120 days. The duration of the temporary waiver may not exceed 5 years. The permittee must reapply for a new temporary waiver. Approved electronic reporting waivers are not transferable. Only permittees with an approved reporting waiver request may submit annual reports on paper for the period that the approved reporting waiver request is effective.

The annual report must include [per 40 CFR § 122.42(e)(4) and 40 CFR § 412] all of the information detailed in the Annual Report Template provided in Appendix H of the permit. For ease of compilation, the permittee may use the fillable pdf template provided, or may opt to provide all of the required information in another document.

**C. Notification of Unauthorized Discharges Resulting from Manure, Litter, and Process Wastewater Storage, Handling, On-site Transport and Application**

The draft permit provides that in the event of an unauthorized discharge of pollutants to a water of the United States, the permittee is required to make immediate oral notification within 24-hours to the EPA Region 10, Surface Water Enforcement Section, Water Enforcement and Field Branch, Seattle, WA at 206-553-1846 and notify EPA, ISDA, and the appropriate IDEQ regional office in writing within five (5) working days of the discharge from the facility. In addition, the permittee must keep a copy of the submitted notification together with the other records required by the draft permit. The discharge notification must include: 1) A description of the discharge and its cause, including a description of the flow path to the receiving water body and an estimate of the flow and volume discharged; and 2) The period of non-compliance, including exact dates and times, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the discharge. This reporting requirement is a standard permit condition under 40 CFR § 122.41(l)(6). Note that runoff that meets the definition of agricultural stormwater does not constitute a point source discharge.

**D. Monitoring Requirements for All Discharges from Wastewater or Manure Storage Structures**

The draft permit provides that in the event of any overflow or other discharge of pollutants from a manure and/or wastewater storage or retention structure, whether or not authorized by the draft permit, the discharge must be sampled and analyzed, and an estimate of the volume of the release and the date and time must be recorded.

Samples must, at a minimum, be analyzed for the following parameters: total nitrogen, nitrate nitrogen, ammonia nitrogen, total phosphorus, E. coli, five-day biochemical oxygen demand (BOD5), total suspended solids, pH, and temperature. The discharge must be analyzed in accordance with approved EPA methods for water analysis listed in 40 CFR §136.

If conditions are not safe for sampling, the permittee must provide documentation of why samples could not be collected and analyzed. For example, the permittee may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.). However, once the dangerous condition has passed, the permittee shall collect a sample from the retention structure (pond or lagoon) from which the discharge occurred [40 CFR § 122.41(j)].

**E. Spills/Releases in Excess of Reportable Quantities**

The draft permit provides that the permittee notifies the National Response Center and IDEQ in the event of a release of a hazardous substance or oil in an amount equal or in excess of a reportable quantity established under either 40 CFR § 110, 40 CFR § 117 or 40 CFR § 302, occurs during a 24-hour period.

**V. STANDARD PERMIT CONDITIONS**

The draft permit for CAFOs incorporates the standard conditions applicable to all permits issued under the NPDES program. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance requirements, and other general requirements.

**VI. DEFINITIONS**

The definition of “fecal coliform” was removed because it is not used in this permit. Otherwise, there are no changes to the definitions section, compared to the 2012 permit.

**VII. OTHER REQUIREMENTS**

**A. State Certification**

Section 401 of the Act, 33 U.S.C. 1341, requires EPA to seek a certification from the State that the conditions of the permit are stringent enough to comply with State water quality standards. The State must either certify that the draft permit complies with State water quality standards, as applicable, or waive certification before the final permit is issued. At the EPA’s request, IDEQ provided the EPA with their draft CWA § 401 certifications on September 6, 2019, see Appendix A. After the public comments have been evaluated and addressed, the preliminary final permit will be sent to the State to begin the final certification process. If the state authorizes different or additional conditions as part of the certification, the permit may be changed to reflect these conditions.

## **B. Environmental Justice**

Executive Order 12898 titled, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities." The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. Additional information regarding the environmental justice process is located at: <https://www.epa.gov/environmentaljustice>. The General Permit implements existing water pollution prevention and control requirements, including best management practices, to ensure compliance with CWA requirements.

## **C. Tribal Coordination and Consultation**

Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA reached out to tribes that could be interested in the draft General Permit and invited them to initiate government-to-government consultation. The EPA will continue to work with tribes during the permit issuance process. The EPA specifically solicits additional comment on this proposed action from tribal officials.

## **D. Endangered Species Act**

Pursuant to Section 7 of the Endangered Species Act (ESA), the EPA is required to consult with the National Marine Fisheries Services and the U.S. Fish and Wildlife Service (collectively, the Services). The EPA has prepared a Biological Evaluation (BE) in which the EPA concludes that the draft permit is not likely to adversely affect any ESA listed species and/or designated critical habitat. The Services concurred with EPA's determination of not likely to adversely affect. The BE and Services' concurrence letters are included as part of the Administrative Record for the draft permit.

## **E. Essential Fish Habitat**

Essential Fish Habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires the EPA to consult with NOAA Fisheries when a proposed discharge has the potential to adversely affect EFH (i.e., reduce quality and/or quantity of EFH). The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g. contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. The EPA's EFH assessment is documented in the BE and concluded the permit would not adversely affect EFH. The NMFS was consulted and concurred with EPA's finding of no adverse effect.



## **VIII. OTHER INFORMATION**

### **A. Impact on Small Businesses**

While this is a permit covered by the EPA's permitting procedures and not a rulemaking, the EPA did analyze potential impact of today's permit on small entities and concludes that this permit reissuance will not have a significant impact on a substantial number of small entities. As discussed on Page 4, Summary of Changes from the Current (2012) Permit, there are few changes to the 2012 Permit. All changes result in either no or negligible incremental cost and no or negligible operational and/or economical burdens. The EPA did not conduct a quantitative analysis of impacts for this permit, as that would only be appropriate if the permit may affect a substantial number of small entities.

In general, the use of a General Permit allows the EPA and dischargers, including small entities, to allocate resources in a more efficient manner, obtain timely permit coverage, and avoid seeking resource-intensive individual permits, while simultaneously providing greater certainty and efficiency and ensuring consistent permit conditions for comparable facilities.

### **Appendix A – Draft 401 Certification**