County of Humboldt Extraction Review Team
2025 Post-Extraction Report

This report is being issued as a Discussion Draft for County and Agency review. Any updated information will be incorporated into the Public Review Draft which will be posted to the County website no later than April 1.

Comments can be submitted during the 60-day public review period of April 1 through June 1, 2026, to the Director of Humboldt County Planning and Building Department.

Comments received will be summarized with responses in Final Draft which will be available by July 1, 2026.

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Humboldt County Board of Supervisors

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County of Humboldt Extraction Review Team (CHERT)

Discussion Draft

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1 INTRODUCTION

This report presents an overview of the Humboldt County gravel extraction for the 2025 mining season. Information on mining volumes, methods, and success of mine operators in meeting approved plans is reported herein. Representing Humboldt County, the County of Humboldt Extraction Review Team (CHERT) provided site-specific recommendations on extraction designs submitted by the operators and their consultants, as did agencies with regulatory and oversight responsibilities, including: (1) U.S. Army Corps of Engineers (Corps), (2) National Marine Fisheries Service (NMFS), (3) California North Coast Regional Water Quality Control Board (NCRWQCB) and (4) California Department of Fish and Wildlife (CDFW). Recommendations were based on field reviews at each site, aerial photos, biological surveys, and topographic and hydrologic information provided by the operators as required by the U.S. Army Corps of Engineers 2015 Letter of Permission (LOP 2015) and individual permits obtained by several operators.

- The LOP and associated documents are the primary federal instruments regulating gravel mining operations in Humboldt County. LOP 2015 can be accessed at: https://www.spn.usace.army.mil/Portals/68/docs/regulatory/LOP_2015-1.pdf.
- The NMFS Biological Opinion provides the basis for many of the LOP's standards and requirements; it can be accessed at: https://www.spn.usace.army.mil/Portals/68/docs/regulatory/Biological%20Opinions/HumboldtGravelLOPBO.pdf

The Humboldt County Board of Supervisors created CHERT (then under a different name) in 1992 to provide scientific oversight on Mad River gravel extraction, which had arrived at an impasse over environmental concerns (discussed below). In 1997, the scope of CHERT services was expanded to include most riverine extraction sites throughout Humboldt County. Additional details on CHERT's role have been presented in earlier post-extraction reports. These reports, along with other County gravel mining documents, can be found at: http://humboldtgov.org/252/Surface-Mining-Reclamation-Act-SMARA-Doc

Four CHERT members were initially appointed by the Humboldt County Board of Supervisors in 1992. The team was selected for having expertise in hydrology, fluvial geomorphology, and river ecology, knowledge and skills necessary for addressing how to manage river gravel mining so as to provide the necessary raw materials for society's needs while minimizing harmful effects on river morphology and habitat. Two of those same four original members continue to serve through the present, and three new members were appointed by the Humboldt County Board of Supervisors in January 2023. The new members participated in all aspects of the CHERT program starting in 2023 and have led CHERT activities in 2025.

1.1 Annual Gravel Mining Review Process

Annual gravel mining oversight and review takes place in pre-extraction and post-extraction phases. The process by which each phase occurs is described in more detail below.

1.1.1 Locations and Terminology

The current geographic extent of Humboldt County mining reaches is shown in Table 1, and a list of CHERT extraction terminology is presented in Table 2. Due to formatting constraints, all tables are presented at the end of this report.

1.1.2 Pre-Extraction Processes

The pre-extraction mining review process begins with CHERT scheduling field visits (typically May-July each year) for those operations planning to mine gravel in a given year. Site visits involve walking sites to observe the river's responses to the previous season's mining and

discussing possible mining methods for the upcoming season. All individuals on the field visits, including CHERT, agency staff, operators and their representatives, discuss observations and insights, and ultimately come to consensus on conceptual mining plans for that season. Field discussions are supported with aerial photos and possibly topographic surveys. As a follow-up to the pre-extraction site visits, CHERT synopsizes the consensus with text and markings on aerial photos and distributes this to all concerned.

Once conceptual plans are developed, the operators' agents prepare submittals aiming to conform to field discussions and consensus. The operators' submittals include air photos depicting the site and layout of mining areas, topographic and hydrologic information, and a narrative consistent with conceptual plans agreed to in the field. Occasionally, preliminary plans need revision, usually for logistical reasons, and a second field review may be needed.

When all issues have been resolved, CHERT issues a written recommendation. Once all parties accept a final version of the mining plan, and it is approved by the Corps, NMFS, NCRWQCB and CDFW, mining can begin provided all agency permits have been obtained. Additional field reviews may be done while mining is taking place due to unexpected circumstances that might require alteration to an approved plan.

1.1.3 Post-Extraction Processes

After mining is completed and before significant river rises, post-extraction field reviews are conducted in late summer or fall. Most often post-extraction field visits are completed before high water. Unfortunately, sometimes not all sites can be visited because of high flows, but this is rare.

A goal is to visit all sites to observe the post-extraction conditions to confirm as-built conditions are consistent with the approved plan, and to recommend any remediation, if needed, before the rivers rise with fall rainfall. On occasion, post-extraction field and/or office reviews reveal problems with extraction implementation, most often from failing to meet approved extraction designs. Often, a problem can be resolved by re-grading within an extraction area. A worst-case scenario may involve replacing mined gravel onto the river bar if significant over-extraction has occurred.

Post-extraction surveys and aerial photography are required following completion of extraction. Each operator compiles a post-extraction submittal, including pre- and post-extraction topographic data, volume calculations, aerial photographs, and other pertinent data. This submittal is required to be submitted to CHERT, CDFW, Corps, and NMFS by December 15 each year and provide a primary information source, along with field observations, for post-extraction reports. Following the December 15 submittal, a second electronic submittal containing monitoring cross section survey data in a specified format is due by January 15.

1.1.4 Guiding Principles

CHERT develops recommendations based on two primary goals: (1) minimizing potential cumulative effects by ensuring that reach-scale mining volumes do not exceed sustainable levels, and (2) ensuring that site-specific methods of extraction (skimming, trenching, etc.) are appropriate for protecting local habitat. The concept of 'sustained yield' gravel extraction requires that gravel extraction volumes not exceed what the river can provide while avoiding adverse effects on infrastructure and riparian habitat. At present, only the Mad River has constraints on the volume of gravel mined each year. Annual mining volumes limits are determined each Spring for the Mad River using a formula developed by the NMFS based on the previous winter's stormflows. The method, called "Flow Estimated Volume", or FEV, set the gravel mining volume cap for 2025 at 175,000 cubic yards (cy).

For the Eel River system, volume constraints (caps) exist for each individual operator. Because it is a much larger river system relative to annual mining volumes, it is assumed that the Eel River (and tributaries) need not have reach-wide mining volume constraints.

Site-specific measures are also recommended by CHERT to reduce or avoid both cumulative and localized potential mining effects. These may include, for example: (1) ensuring that skim floor elevations are sufficiently high to maintain low flow channel confinement so that small rises in river stage do not inundate skimmed surfaces too readily; (2) avoiding riparian vegetation both adjacent to and within mining areas; (3) buffering potential salmonid spawning riffles, among others.

With time, experience on the rivers, and interaction with regulatory agencies, mine operators, and other stakeholders, the measures taken to protect river habitat and to improve program functioning are continually being refined. This feedback process, termed 'adaptive management', helps ensure that gravel mining and management improves resource protection, the quality of information provided by mine operators, and program efficiency. Problems occasionally arise, however, when either the river's response to previous mining results in undesirable river habitat conditions, or an operator deviated from an approved mining plan. Any such problems are described in the performance issues section of this report.

In addition to annually recurring activities (e.g., mining site reviews, extraction recommendations, annual post-extraction report preparation), CHERT occasionally participates in other activities. For example, CHERT prepared a technical analysis of Mad River physical channel conditions, riparian vegetation, and fish habitat in 2009 to support physical and biological assessments required for renewal of federal and state permits. Such analyses occur when requested by the County, the operators, or other stakeholders and with direction from the Humboldt County Board of Supervisors. CHERT also provides comments on drafts of various other documents, such as the Corps' updated letters of permission (LOP), NMFS biological opinions, etc.

2 2025 EXTRACTION SUMMARIES

2.1 River Reach Extraction Volumes

In 2025, CHERT reviewed extraction areas (some multiple times) distributed among 16 mining sites in Humboldt County. Most mining sites had more than one extraction area. Appendix A provides historical gravel extraction volumes from the beginning of the CHERT program in 1992 (Mad River) and the expansion in 1997 (Eel River, Trinity River, and isolated sites added). As shown in Table 3, the total volume of gravel approved for extraction in 2025 was 480,757 cy, and the total volume actually extracted was 387,257 cy, or 81% of that approved for extraction.

For the Mad River, the total volume of gravel approved for extraction in 2025 was 142,887 cy, and the volume of gravel actually mined was 131,688 cy (Table 3). The total volume mined was 25% below the 175,000 cy FEV cap. We note that gravel extraction of up to 20,000 cy is annually done by Blue Lake Rancheria from the Mad River but is not included in this report as the Rancheria of not part of the CHERT program.

Site-specific 2025 extraction information is provided for the following extraction areas: Mad River (Table 4), lower Eel River (0), Van Duzen River (Table 6), South Fork Eel River (Table 7), and Trinity River (0). Each table lists sites from downstream to upstream. No gravel extraction was proposed for the Middle Eel River or at isolated sites in 2025.

3 PERFORMANCE ISSUES

To evaluate operator performance and compliance, CHERT and regulatory agency staff conduct post-extraction field reviews in the fall after completion of operations, as well as review post-extraction documentation (cross sections, air photos, and other materials) to ensure approved mining plan design specifications were met and that all requirements of the Corps' LOP 2015 are met. Operator performance was successful overall in conducting 2025 operations consistent with approved mining plans, but some problematic conditions were noted at a few sites, as described in Section 3.2 below.

3.1 Pre-Extraction Preparations

Gravel operators are instructed to have pre-extraction information (cross sections and air photos) ready for pre-extraction site visits. Having this information at hand during the site visits helps inform participants as to the general condition of the mining site, interpreting the river's response to previous mining, and responses to winter stormflows. Unfortunately, spring topographic surveys and obtaining air photos can be delayed by weather. Rather than wait for all materials, pre-extraction site visits are often conducted with air photos only. This is generally believed to be preferable to delaying the review process that can result in operators rushing to complete mining and/or apply for operating season extensions in the fall.

At several sites, pre-extraction narratives were incomplete and required revisions before CHERT could complete their extraction recommendation. Having to request the required materials for pre-extraction reviews can delay approval of a mining plan and shift operations to later in the season. This can delay mining plan reviews and implementation of mining, sometimes triggering mining extension requests.

3.2 Post-Extraction Reporting and Results

Post-extraction reporting is due by December 15 and includes the following required information: dates of any pre-extraction surveys and results (snowy plover, etc.); the beginning and end dates of gravel extraction; the dates of bridge installation and removal; detail on how gravel extraction deviated in any way from the pre-extraction plan, including volumetric differences; reasoning or explanation of sites that were over- or under-excavated; and, details of any biological enhancement activities. Post-extraction electronic survey files are due by January 15. See Annual Data Submittal Requirements in LOP Appendix C for additional details on post-extraction submittal requirements.

Many of the 2025 submittals were delivered late (some by several weeks) and/or were incomplete due to lacking required information or meeting specified criteria. In these cases, CHERT identified the deficiencies and requested the correct information be provided via revised submittals. As of the writing of this report, CHERT has not received the requested revisions and/or the electronic survey files for the following sites:

- Mad River Sand and Gravel, Guynup Bar (revised post-extraction submittal).
- Randall Sand and Gravel, Home Bar (electronic survey files for 2024 and 2025).
- Humboldt Redwood Company Middle Eel River bars (revisions associated with five-year survey requirements).

Post-extraction submittals provide the primary information source for CHERT's annual reporting (i.e., this report), and incomplete submittal packages can delay its preparation.

3.2.1 Volumetric Over-Extraction from Approved Mining Plans

Although the total mined volume at all sites was below the approved volumes (Table 3), certain areas at some sites exceeded their approved volumes. Mined areas that extracted 10% or more

above their approved volumes are highlighted in Tables 4–8. The 10% 'threshold' (i.e., extraction exceeding 110% of approved volume) has been used for years as an informal trigger for distinguishing over-extraction from unavoidable inaccuracies in pre- and post-extraction surveys and volume computations. Extraction volume exceeded approved volume by 10% or more at the following sites:

Lower Eel River

Mercer Fraser Company Sandy Prairie site, Area B. This area was a single skim shared between Plant A and Plant B sites, over-excavation volumes were 114% at Plant A and 111% at Plant B. The post-extraction report explains the over excavation is a result of skim floor variations, both higher and lower than the 35% water surface elevation. Cross sections submitted as part of the post-extraction report show excavation depths up to 1 ft below the 35% water surface elevation.

Trinity River

Mercer Fraser Company Willow Creek site, Area A. This area represents a single skim that excavated 126% of the approved volume. Reasoning for the over-excavation is linked to the LOP requirement that specifies Trinity River extraction floor elevations must remain at least 2 feet above the water surface at the time of extraction. The post-extraction report noted that the water surface at the time of extraction was lower than what was identified on the extraction plan, and therefore extraction depths were able to be increased while still maintaining the 2 ft separation.

3.2.2 Other Deviations from Approved Mining Plans

In addition to the over-excavations described in the previous section, other problems observed during the course of gravel mining review are noted below.

Mad River

Mad River Sand and Gravel, Guynup site.

1. Issues with topographic surveys resulted in incorrect design elevations, which resulted in some portions of Area 1 and Area 2 being excavated below the 35% water surface elevation.
2. Area 2 is a skim that had a permitted extraction area of 2.4 acres but was expanded to 3.4 acres at the operator's discretion, without CHERT or agency consultation or approval. The volume excavated outside the approved Area 2 boundary was reported by the operator as 1,481 cy. Following a post-extraction field site visit, the CHERT and agency review team considered having the operator replace this material, but concluded (1) the as-built condition did not appear to create an immediate threat to aquatic habitats or geomorphic instability, and (2) replenishment would create a greater overall environmental impact compared to allowing the river to replenish the site naturally.
3. The above issues were also addressed in a CDFW letter of non-compliance, which also describes additional issues including Area 3 RSP removal that was not performed.

Wahlund Construction Company, Blue Lake Bar site.

1. Area B is a skim that was initially included with the operator's original extraction plan but was later removed as part of the operator's plan amendment; however, extraction was still performed to a total of 855 cy. This issue was also identified by CDFW in a letter of non-compliance issued to the operator.
2. Area E is a Riparian Enhancement Extraction (REE) that was not constructed as designed, preventing the feature from functioning as a proper REE. This was observed during the

post-extraction CHERT and agency field visit with the operator. Both immediate and long-term corrective actions were identified, including outlet modifications (immediate) and side slope and floor gradient modifications (long-term). It is CHERT's understanding that the operator has implemented the immediate corrections and will implement the long-term corrections as part of the 2026 mining season under CDFW directive, as outlined in their letter of non-compliance.

3. In addition to the above items, the CDFW letter of non-compliance describes: (a) unauthorized haul road construction, and (b) inconsistent field marking of the 35% water surface elevation.

Eureka Ready Mix, Christie Bar site.

1. The CDFW discovered issues centered on unpermitted access road modifications at the site during the extraction season, including widening and associated riparian vegetation disturbance. These issues were summarized in a letter of non-compliance issued to the operator.

South Fork Eel River

Randall Sand and Gravel, Home Bar site.

1. Area 1 is a skim where extraction was performed without using on-site survey control or grade checks, resulting in slight over-excavation near the center of the extracted area that created improper site drainage (ponding). This was observed during the post-extraction CHERT and agency field visit with the operator. The CHERT and agency team recommended additional grading to correct this problem, which was performed immediately by the operator.

Van Duzen River:

MC Resources, Van Duzen River Ranch site.

1. Trench B was left with very high (>12 ft) and steep walls (> 1:1) on the upstream end. This was considered unsafe for people, livestock and wildlife that travel on the river bar. In areas with substantial bank deposits, a skim should be the preferred technique rather than a trench. Furthermore, gravel fill was observed on the river bar adjacent to the trench. It appears that that excavated material, placed in piles to drain, was not completely removed.
2. Trench C was relocated 50 ft streamward from the approved design at the operator's discretion, without CHERT or agency consultation or approval. The 2025 CHERT recommendation and the Corps LOM (condition #9) state that the operator shall consult with CHERT and agency representatives if excavations need to (or do) deviate from their approved design. This is required to ensure that these changes do not result in adverse impacts to aquatic habitats or geomorphic processes.

Thomas R. Bess, Bess site.

1. Permitted site access was via existing haul roads from the right (north) bank, including installation of a single temporary bridge to access Area B and Area C. An alternative crossing location was used and crushed aggregate fill was substituted for a bridge, as observed during the CHERT and agency post-extraction field visit, and documented in a non-compliance letter issued by CDFW.

4 RECOMMENDATIONS

Based on the 2025 performance issues and other deviations noted in the previous section, CHERT recommends the following for future mining:

Recommendation 1. Pre-extraction ands post-extraction submittal requirements as outlined in the Appendix C of the LOP are not being followed consistently. In order to ensure a timely pre-extraction regulatory review, operators must make their best effort to provide all required materials in a timely manner. Similarly, to ensure timely preparation of CHERT's annual report, operators must provide all required post-extraction materials by their December 15 and January 15 deadlines. **CHERT recommends that operators submit the necessary materials 15 days before deadlines (i.e., Dec 1 and Jan 1) to ensure that any insufficiencies can be remediated before the deadline.**

Recommendation 2. As stated previously, operators need to alert review agencies and CHERT to problems as soon as they are discovered. Ensuring proper site performance, e.g., habitat protection and effective drainage, may require adaptive management during the mining season. This course of action is far better than discovering problems during post-extraction inspections after equipment and/or bridges are removed from the site. **CHERT recommends that operators be proactive and engage the agencies and CHERT quickly if problems arise during extraction or the extraction access needs revision.**

Recommendation 3. Operators must consult with CHERT and agency representatives if excavations are going to deviate from their approved design, to ensure the deviations will not create an adverse condition that increases risk to aquatic habitats, geomorphic stability, or exceed the total site-approved extraction volume. For example, field conditions may allow for trenches to extend deeper than approved plans show, but risks must be carefully considered, and excavation should not proceed without agency approval. **CHERT recommends that operators be proactive and engage the agencies and CHERT quickly if extraction areas need revision or relocation.**

Recommendation 4. For the Guynup site and Blue Lake Bar site where extraction occurred outside of approved areas (described in Section 3.2.2), **CHERT recommends subtracting the over-excavated volume from next year's (2026) site-specific volume allocation.**

Recommendation 5. All extraction work must be performed using survey control to ensure excavations conform with approved designs. In addition, operators must conduct a detailed inspection of all extraction areas to ensure approved extraction designs have been met while equipment access to the extraction areas is still possible. This should be performed around two weeks before completion of operations and bridge removal. Persons conducting inspections must have the skills and tools necessary to evaluate whether cut depths, extraction area perimeters, and mitigation features are in compliance with approved plans. **CHERT recommends that operators incorporate field oversight by skilled people with the tools necessary to evaluate and direct the extraction according to the approved extraction plan.**

Recommendation 6. The 35% exceedance water surface elevation is a firm limit on the maximum depth that skims can be excavated. This elevation is not adjustable nor does it represent an average. If operators cannot demonstrate their extraction methods are capable of meeting this criterion, **CHERT may recommend elevating skim floor limits on a site-specific basis to 1 ft above the 35% water surface elevation to provide a safety factor from over-excavation.**

5 TABLES

Table 1. Description of river reaches used to report extraction data.

River and approximate reach length	Reach description
Mad River, 7 mi	From approximately seven miles downstream from the Blue Lake Fish Hatchery to just below the Highway 299 Bridge near Arcata.
Lower Eel River, 6 mi	From approximately six miles downstream from the mouth of the Van Duzen River to near Fernbridge.
Lower Van Duzen River, 5 mi	Upstream approximately five miles from the mouth of the Van Duzen River.
Middle Eel River, 26 mi	Upstream from Scotia (River Mile 20) for approximately 26 miles to River Mile 46.
South Fork Eel River, 17 mi	From Garberville (River Mile 33) upstream to near the Mendocino County line (River Mile 50).
Trinity River, 15 mi	Downstream about 15 miles from near Willow Creek into the Hoopa Valley.
Isolated sites, N/A	Five Humboldt County extraction sites are more or less isolated from the reaches described above. These are the *Satterlee Bar* on the main stem of the Eel River at Fort Seward, the *PL Bar* on the Van Duzen River, the *Branstetter Bar* on Bear River, the *Charles Bar* on Larabee Creek, and the *Cook Bar* on the North Fork of the Mattole River.

Table 2. Extraction technique terminology and descriptions.

Extraction technique	Description
Narrow Shoreline Skim	A skim with one edge close to the low flow channel at or above the 35% flow elevation with a width no greater than 1/3 that of the unvegetated bar surface.
Wide Shoreline Skim	Same as above but wider.
Narrow Offset Skim	A skim that has a substantial vertical or horizontal offset from the low flow channel and a width no greater than 1/3 that of the unvegetated bar surface.
Wide Offset Skim	Same as above, but wider. Some may refer to this as a 'horseshoe' skim.
Dry Trench	A relatively long, linear shallow skim that remains above the water table at the time of excavation. When located in a secondary channel that normally dries up during the low flow season, it may be called an overflow channel skim.
Wet Trench	A trench sufficiently deep to intersect the water table at the time of excavation, designed for high water to flow through the trench.
Alcove	An excavation designed to simulate naturally occurring shoreline pools, typically located on the backside of meanders, that can provide deep, cool water during summer months and/or winter high velocity refuge.
Dry Alcove	Same as above, but to a depth above the water table at the time of excavation.
Fish Access Channel	A channel excavation that may include pools and incorporate large wood designed to temporarily improve fish migration access.
Riparian Enhancement Extraction (REE)	An open-sided pit excavated down to moist gravel on floodplain surfaces that were too dry to support beneficial riparian plants, such as willows, cottonwoods and alders.

Table 3. Humboldt County 2025 gravel extraction summary by river reach.

River Reach	No. of mined sites	No. of mined areas	Approved volume (cu yd)	Extracted volume (cu yd)	Percent of approved volume	Extracted area (acres)
Lower Mad River	8	19	142,887	131,688	92%	27.2
Lower Eel River	2	8	163,195	138,467	85%	30.9
Middle Eel River	0	0	0	0	0%	0
Van Duzen River	3	12	116,101	87,535	75%	16.3
South Fork Eel River	1	1	37,632	9,774	26%	1.4
Trinity River	2	3	20,942	19,793	95%	3.0
Isolated sites	0	0	0	0	0%	0
TOTAL	**16**	**43**	**480,757**	**387,257**	**81%**	**78.8**

Table 4. Mad River gravel extractions for the 2025 extraction season.

Operator	Site	Area	Method	Approved volume (cu yd)	Extracted volume (cu yd)	Percent of approved volume	Extracted area (acres)
Eureka Ready Mix	O'Neill Bar	A	Wide shoreline skim	5,150	4,850	94.2%	2.40
Eureka Ready Mix	Johnson-Spini Bar	A	Wide shoreline skim	28,753	28,491	99.1%	6.00
Mercer Fraser Co.	Essex Bar	1	Wide shoreline skim	3,253	2,242	68.9%	0.50
Garth Sundberg, Inc.	Simpson Bar	A	Wide shoreline skim	5,110	5,101	99.8%	1.48
Eureka Ready Mix	Christie Bar	A	Skim	1,886	1,790	94.9%	0.35
Eureka Ready Mix	Christie Bar	B	trench	15,640	15,330	98.0%	0.89
Eureka Ready Mix	Christie Bar	C	Skim	2,870	2,760	96.2%	0.86
Eureka Ready Mix	Christie Bar	D	Skim	3,010	2,790	92.7%	1.53
Eureka Ready Mix	Christie Bar	E	Skim	2880	2770	96.2%	0.60
Eureka Ready Mix	Christie Bar	F	Skim	5,110	5,010	98.0%	1.54
Eureka Ready Mix	Christie Bar	G	Skim	8,390	8,310	99.0%	1.37
Wahlund Construction	Blue Lake Bar	A	Bench skim	1,371	1,045	76.2%	0.56
Wahlund Construction	Blue Lake Bar	B	Bench skim	856	749	87.5%	0.50
Wahlund Construction	Blue Lake Bar	C	Trench	7,994	6,697	83.8%	0.66
Wahlund Construction	Blue Lake Bar	D	Bench skim	2,880	0	0.0%	0.00
Wahlund Construction	Blue Lake Bar	E	REE	5,593	3,856	68.9%	0.45
Eureka Ready Mix	Emmerson Bar	A	Bench skim	6,580	6,575	99.9%	1.32
Eureka Ready Mix	Emmerson Bar	B	Bench skim	1,960	1,900	96.9%	0.34
Mad River Sand and Gravel	Guynup Bar	1	Inboard skim	19,784	19,978	101.0%	2.45
Mad River Sand and Gravel	Guynup Bar	2	Narrow skim	13,817	11,444	83%	3.40
River Reach Totals =	**8**	**20**	**-**	**142,887**	**131,688**	**92%**	**27.20**

Table 5. Lower Eel River gravel extractions for the 2025 extraction season. Orange cells with red font indicate extraction exceeding 10% above (or 110% of) the approved volume. Gray shaded rows are sites that were not mined.

Operator	Site	Area	Method	Approved volume (cu yd)	Extracted volume (cu yd)	Percent of approved volume	Extracted area (acres)
Eureka Ready Mix	Singley Bar	n/a	No extr. proposed	n/a	n/a	n/a	n/a
County of Humboldt	Worswick Bar	n/a	No extr. proposed	n/a	n/a	n/a	n/a
Eureka Ready Mix	Drake Bar	n/a	No extr. proposed	n/a	n/a	n/a	n/a
Mercer Fraser Co.	Sandy Prairie: Plant A	A	Skim	20,973	20,105	96%	3.2
Mercer Fraser Co.	Sandy Prairie: Plant A	B	Skim	4,340	4,937	114%	1.8
Mercer Fraser Co.	Sandy Prairie: Plant A	C	Skim	44,581	21,651	49%	6.2
Mercer Fraser Co.	Sandy Prairie: Plant B	B	Skim	23,327	25,933	111%	7.9
Mercer Fraser Co.	Sandy Prairie: Plant B	D	Skim	23,004	21,710	94%	4.3
Mercer Fraser Co.	Sandy Prairie: Plant B	E	Trench	12,411	11,592	93%	1.2
Eureka Ready Mix	Hauck Bar	A	Skim	31,498	29,873	95%	5.7
Eureka Ready Mix	Hauck Bar	G	Skim	3,061	2,666	87%	0.6
River Reach Totals =	**2**	**8**	**---**	**163,195**	**138,467**	**85%**	**30.9**

Table 6. Van Duzen River gravel extractions for the 2025 extraction season. Gray shaded rows are sites that were not mined.

Operator	Site	Area	Method	Approved volume (cu yd)	Extracted volume (cu yd)	Percent of approved volume	Extracted area (acres)
Leland Rock	downstream	A	Skim	3,709	3,592	97%	0.8
Leland Rock	downstream	B	Trench	4,103	3,154	77%	0.4
Leland Rock	downstream	C	Trench	4,117	3,368	82%	0.4
Leland Rock	downstream	E	Trench	13,415	12,632	94%	1.2
Leland Rock	downstream	F	Skim	14,219	11,243	79%	3.1
Van Duzen River Ranch	South Bank	A	Skim	17,715	16,115	91%	3.9
Van Duzen River Ranch	South Bank	B	Trench	15,695	7,235	46%	0.8
Van Duzen River Ranch	North Bank	C	Trench	23,170	14,840	64%	1.5
Bess	Upstream of plant	A	Skim	2,470	2,390	97%	0.5
Bess	Downstream of plant	B	Skim	8,377	6,410	77%	2.4
Bess	Downstream of plant	C	Trench	3,333	1,726	52%	0.3 [a]
Bess	Downstream of plant	D	Skim	5,778	4,830	84%	1.4
Humboldt County PWD	PL-Van Duzen Bar	n/a	No extr. proposed	n/a	n/a	n/a	n/a
Humboldt County PWD	Charles Bar	n/a	No extr. proposed	n/a	n/a	n/a	n/a
River Reach Totals =	**3**	**12**	**---**	**116,101**	**87,535**	**75%**	**16.3**

[a] Trench nested within skim perimeter

Table 7. South Fork Eel River gravel extractions for the 2025 extraction season. Gray shaded rows are sites that were not mined.

Operator	Site	Area	Method	Approved volume (cu yd)	Extracted volume (cu yd)	Percent of approved volume	Extracted area (acres)
Wallan and Johnson	Wallan and Johnson Bar	n/a	No extr. proposed	n/a	n/a	n/a	n/a
Randall Sand and Gravel	Home Bar	1	wide shoreline skim	37,632	9,774	26%	1.4
River Reach Totals =	**1**	**1**	**---**	**37,632**	**9,774**	**26%**	**1.4**

Table 8. Trinity River gravel extractions for the 2025 extraction season. Orange cells with red font indicate extraction exceeding 10% above (or 110% of) the approved volume. Gray shaded rows are sites that were not mined.

Operator	Site	Area	Method	Approved volume (cu yd)	Extracted volume (cu yd)	Percent of approved volume	Extracted area (acres)
Mercer Fraser Co.	Willow Creek Site	A	Skim	3,927	4,958	126%	0.95
Mercer Fraser Co.	Willow Creek Site	B	Skim	7,545	5,585	74%	0.92
Josh McKnight	McKnight Bar	A	Wide offset skim	9,470	9,250	98%	1.1
Klamath Trinity Aggregates	Rowland Bar	n/a	no extr. proposed	n/a	n/a	n/a	n/a
River Reach Totals =	**2**	**3**	**---**	20,942	19,793	**95%**	2.97

APPENDIX A. Annual Extraction Volumes 1992–2025.

Humboldt County Totals ("---" means unknown)				Mad River ("---" means unknown)			
Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent	Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent
1992	---	---	---	1992	115,000	115,000	100%
1993	---	---	---	1993	122,100	138,400	113%
1994	---	---	---	1994	134,500	134,898	100%
1995	---	---	---	1995	210,637	226,265	107%
1996	---	---	---	1996	203,998	189,517	93%
1997	---	---	---	1997	252,926	210,976	83%
1998	1,075,095	820,952	76%	1998	265,795	223,352	84%
1999	1,142,212	860,974	75%	1999	196,212	174,974	89%
2000	987,848	706,234	71%	2000	204,748	146,534	72%
2001	979,515	494,819	51%	2001	199,215	167,719	84%
2002	1,023,866	748,461	73%	2002	204,991	171,937	84%
2003	881,090	581,800	66%	2003	150,390	136,790	91%
2004	692,020	440,710	64%	2004	156,540	141,250	90%
2005	664,565	493,240	74%	2005	138,475	127,200	92%
2006	700,660	561,845	80%	2006	174,245	162,360	93%
2007	784,108	612,132	78%	2007	165,504	153,341	93%
2008	659,022	534,821	81%	2008	142,043	130,613	92%
2009	454,213	211,207	46%	2009	0	0	n/a
2010	562,303	374,313	67%	2010	111,439	86,246	77%
2011	774,582	505,805	65%	2011	147,380	143,124	97%
2012	553,704	384,514	69%	2012	111,317	100,329	90%
2013	362,222	226,362	62%	2013	80,525	76,919	96%
2014	376,467	285,527	76%	2014	69,322	66,743	96%
2015	400,919	272,240	68%	2015	70,230	69,719	99%
2016	545,275	463,382	85%	2016	145,769	142,510	98%
2017	563,540	363,297	64%	2017	153,778	113,841	74%
2018	456,236	368,681	81%	2018	83,945	80,270	96%
2019	522,886	465,564	89%	2019	143,727	126,460	88%
2020	384,617	266,403	69%	2020	60,680	56,609	93%
2021	397,045	332,048	84%	2021	68,760	71,008	103%
2022	465,081	361,597	78%	2022	68,376	68,671	100%
2023	614,278	476,222	78%	2023	139,618	136,401	98%
2024	602,207	453,979	75%	2024	152,078	153,716	101%
2025	480,757	387,257	81%	2025	142,887	131,688	92%
Totals	**18,106,333**	**13,054,386**	**72%**	**Totals**	**4,787,150**	**4,375,380**	**91%**
Averages	**646,655**	**466,228**	**72%**	**Averages**	**140,799**	**128,688**	**91%**

APPENDIX A. Annual Extraction Volumes 1992–2025 (continued)

Lower Eel River ("---" means unknown)			
Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent
1992	---	---	---
1993	---	---	---
1994	---	---	---
1995	---	---	---
1996	---	---	---
1997	561,700	326,500	58%
1998	399,100	273,000	68%
1999	471,400	290,500	62%
2000	291,300	208,600	72%
2001	389,900	119,300	31%
2002	387,300	220,000	57%
2003	318,300	163,900	51%
2004	188,840	120,305	64%
2005	199,370	166,280	83%
2006	235,495	208,240	88%
2007	243,097	177,334	73%
2008	237,955	215,760	91%
2009	229,386	106,467	46%
2010	208,286	188,730	91%
2011	301,537	214,730	71%
2012	226,520	188,994	83%
2013	176,477	80,918	46%
2014	127,671	97,232	76%
2015	168,581	94,954	56%
2016	179,659	151,456	84%
2017	183,063	102,683	56%
2018	163,775	145,540	89%
2019	129,476	126,350	98%
2020	154,619	98,786	64%
2021	206,461	195,449	95%
2022	234,947	162,234	69%
2023	255,454	181,338	71%
2024	278,453	187,738	67%
2025	163,195	138,467	85%
Totals	**7,311,317**	**4,951,785**	**68%**
Averages	**252,114**	**170,751**	**68%**

Middle Eel River ("---" means unknown)			
Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent
1992	---	---	---
1993	---	---	---
1994	---	---	---
1995	---	---	---
1996	---	---	---
1997	147,300	84,900	58%
1998	157,900	99,400	63%
1999	134,900	124,900	93%
2000	160,100	131,000	82%
2001	116,100	64,000	55%
2002	132,767	121,608	92%
2003	74,030	54,060	73%
2004	0	0	n/a
2005	0	0	n/a
2006	0	0	n/a
2007	89,990	64,424	72%
2008	0	0	n/a
2009	0	0	n/a
2010	0	0	n/a
2011	76,715	35,618	46%
2012	29,569	25,880	88%
2013	0	0	n/a
2014	59,298	45,394	77%
2015	48,146	39,350	82%
2016	82,276	78,731	96%
2017	59,409	44,316	75%
2018	27,853	24,570	88%
2019	84,345	82,147	97%
2020	0	0	n/a
2021	0	0	n/a
2022	0	0	n/a
2023	0	0	n/a
2024	0	0	n/a
2025	0	0	n/a
Totals	**1,480,698**	**1,120,298**	**76%**
Averages	**51,059**	**38,631**	**76%**

APPENDIX A. Annual Extraction Volumes 1992–2025 (continued)

South Fork Eel River ("---" means unknown)			
Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent
1992	---	---	---
1993	---	---	---
1994	---	---	---
1995	---	---	---
1996	---	---	---
1997	67,700	74,700	110%
1998	75,400	70,100	93%
1999	85,400	75,900	89%
2000	75,700	53,700	71%
2001	66,000	43,100	65%
2002	58,163	48,122	83%
2003	87,060	54,660	63%
2004	80,730	50,745	63%
2005	82,770	36,480	44%
2006	92,000	35,075	38%
2007	90,737	73,956	82%
2008	32,358	24,833	77%
2009	40,170	24,986	62%
2010	42,864	27,732	65%
2011	36,063	14,244	39%
2012	19,039	0	0%
2013	27,588	17,212	62%
2014	32,341	24,754	77%
2015	20,610	15,129	73%
2016	34,863	23,657	68%
2017	36,679	17,010	46%
2018	34,751	20,306	58%
2019	38,724	14,451	37%
2020	34,885	8,476	24%
2021	22,642	6,547	29%
2022	38,800	11,610	30%
2023	32,346	17,735	55%
2024	31,020	9,868	32%
2025	37,632	9,774	26%
Totals	**1,455,035**	**904,862**	**62%**
Averages	**50,174**	**31,202**	**62%**

Van Duzen River ("---" means unknown)			
Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent
1992	---	---	---
1993	---	---	---
1994	---	---	---
1995	---	---	---
1996	---	---	---
1997	120,000	81,600	68%
1998	119,100	103,700	87%
1999	159,900	108,800	68%
2000	194,800	121,300	62%
2001	161,700	85,600	53%
2002	202,500	167,400	83%
2003	175,100	123,000	70%
2004	179,045	92,610	52%
2005	159,090	123,170	77%
2006	134,910	104,750	78%
2007	152,773	113,184	74%
2008	209,176	137,850	66%
2009	175,132	73,236	42%
2010	169,041	69,917	41%
2011	175,724	71,903	41%
2012	142,191	47,760	34%
2013	63,111	41,713	66%
2014	74,701	51,404	69%
2015	85,978	53,088	62%
2016	92,995	67,028	72%
2017	108,686	76,526	70%
2018	108,276	79,609	74%
2019	126,614	116,156	92%
2020	134,433	102,532	76%
2021	99,182	59,044	60%
2022	122,958	119,082	97%
2023	186,860	140,748	75%
2024	140,265	99,836	71%
2025	116,101	87,535	75%
Totals	**4,090,342**	**2,720,081**	**67%**
Averages	**141,046**	**93,796**	**67%**

APPENDIX A. Annual Extraction Volumes 1992–2025 (continued)

Trinity River ("---" means unknown)			
Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent
1992	---	---	---
1993	---	---	---
1994	---	---	---
1995	---	---	---
1996	---	---	---
1997	47,500	40,000	84%
1998	35,000	28,100	80%
1999	64,300	66,900	104%
2000	18,000	22,200	123%
2001	46,600	15,100	32%
2002	38,145	19,394	51%
2003	76,210	49,390	65%
2004	62,075	32,700	53%
2005	64,100	30,570	48%
2006	64,010	51,420	80%
2007	42,007	29,893	71%
2008	12,490	11,701	94%
2009	0	0	n/a
2010	30,673	1,688	6%
2011	37,163	26,186	70%
2012	25,068	21,551	86%
2013	5,521	723	13%
2014	13,134	0	0%
2015	7,374	0	0%
2016	9,713	0	0%
2017	21,925	8,921	41%
2018	17,109	0	0%
2019	0	0	n/a
2020	0	0	n/a
2021	0	0	n/a
2022	0	0	n/a
2023	0	0	n/a
2024	3,391	2,821	83%
2025	20,942	19,793	95%
Totals	**762,450**	**479,051**	**63%**
Averages	**26,291**	**16,519**	**63%**

Isolated Sites ("---" means unknown)			
Year	Approved Volume (cubic yards)	Extracted Volume (cubic yards)	Percent
1992	---	---	---
1993	---	---	---
1994	---	---	---
1995	---	---	---
1996	---	---	---
1997	---	---	---
1998	22,800	23,300	102%
1999	30,100	19,000	63%
2000	43,200	22,900	53%
2001	0	0	n/a
2002	0	0	n/a
2003	0	0	n/a
2004	24,790	3,100	13%
2005	20,760	9,540	46%
2006	0	0	n/a
2007	0	0	n/a
2008	25,000	14,064	56%
2009	9,525	6,518	68%
2010	0	0	n/a
2011	0	0	n/a
2012	0	0	n/a
2013	0	0	n/a
2014	0	0	n/a
2015	0	0	n/a
2016	0	0	n/a
2017	0	0	n/a
2018	0	0	n/a
2019	0	0	n/a
2020	0	0	n/a
2021	0	0	n/a
2022	0	0	n/a
2023	0	0	n/a
2024	0	0	n/a
2025	0	0	n/a
Totals	**176,175**	**98,422**	**56%**
Averages	**6,292**	**3,515**	**56%**