



**US Army Corps
of Engineers®**
Portland District



WILLAMETTE VALLEY SYSTEM OPERATIONS AND MAINTENANCE

FINAL ENVIRONMENTAL IMPACT STATEMENT

APPENDIX K: RECREATION ANALYSIS

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EXECUTIVE SUMMARY

As shown in Recreation Environmental Consequences Chapter 3, no substantial affects to recreation are expected under the Preferred Alternative scenario for the Willamette River Basin (WRB) when compared to the No-action Alternative. However, there are expected to be some moderate to major effects in particular locations under some alternative scenarios.

National Economic Development (NED) account recreation affects were analyzed using U.S. Army Corps of Engineers' (USACE) Visitation Estimation Reporting System (VERS), U.S. Forest Service (USFS) visitation data, Unit-Day-Value (UDV) data, as well as USACE Hydrologic Engineering Center (HEC) Reservoir System Simulation (ResSim) software modeled reservoir elevation data.

The results of the NED analysis, particularly reservoir annual visitations, were used as inputs into the Regional Economic Development (RED) account model to analyze changes in economic activity. For riverine recreation activities downstream of reservoirs, a qualitative analysis was done using HEC-ResSim modeled flows at several river gage locations across the hydrologic period of record. On an annual basis, there are no substantial effects expected for any of the river gage location/alternative combinations. On a seasonal basis, there are several location/season/alternative combinations that show both positive and negative moderate (+/- 5%-20%) and major effects (+/- >20%) compared to the No-action Alternative.

CHAPTER 1 – RECREATION ANALYSIS INPUTS

1.1 VISITATION

Visitation to Willamette Valley System Reservoirs is estimated using the USACE VERS (USACE, 2022) data for 2019. A visitation is defined as the entry of one person into a recreation area or site to carry on one or more recreational activities. Average visitation estimates were indexed to 2021 using U.S. Census population data for the county in which the project is located (USCB 2016, USCB 2021e). It is recognized that using U.S. Census county population estimates to index 2016 visitation data to 2021 assumes that most visits are by local people. However, it is unknown whether or not this is actually the case. If most visits are actually by non-local people, the visitation estimates in this appendix may be somewhat overstated.

Visitations are tracked by VERS using various tools such as vehicle meters and the National Recreation Reservation System. For instances where a particular recreation activity at a project is not estimated by the VERS, existing visitation and other data were used to estimate visitation for the activity. For example, where number of camping visits data was not available, but campsites are known to exist and are published typically by the U.S. Forest Service, a ratio of campers per campsite was calculated using data where both number of campsites and estimated camping visits were available. This resulted in an estimate of 118.053 campers per campsite per year.

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VERS data provides estimated visitation figures for campgrounds located on USACE/Federal, fee-owned land, state and county-managed campgrounds as well as other known campgrounds, including those operated by the U.S. Forest Service. Other campgrounds within 10 miles of USACE reservoirs were identified using Open Street Map geospatial data (MGC No Date) and are included in the number of estimated camper visitations. Two known dispersed campgrounds, one each near Cougar Reservoir and Blue River Reservoir were included in the data. For these dispersed camping areas, aerial imagery was used to estimate the number of campsites. After examination of several past years of imagery via Google Earth, no images of actual campers could be seen, even though the published dispersed camping areas did look to exist, judging from road access and scattered open and forested areas. It was therefore estimated by best professional judgement that 15 sites exist at each of these locations. It is assumed that many visitors to these nearby campgrounds plan to make the <10- mile journey to the larger reservoir but may under some circumstances choose to forego plans to camp at all if the reservoir is at an undesirably low water elevation. Non-fee-owned land campgrounds added to this analysis by reservoir are shown in the table below.

Reservoir	Camping Areas	Campsites ¹
BLUE RIVER LAKE OR	1. Dispersed	15
	2. Mona	23
	3. Lookout	55
COUGAR LAKE OR	1. Slide Creek	16
	2. Sunnyside	13
	3. Cougar Crossing	12
	4. Dispersed	15
DETROIT LAKE	1. Cove Creek	57
	2. Hoover	28
	3. Santiam Flats	26
	4. South Shore	25
	5. Elk Lake	17
	6. Detroit Lake State CG	300
FALL CREEK LAKE OR	1. Big Pool	5
	2. Broken Bowl	16
	3. Clark Creek	1
	4. Dolly Varden	5
GREEN PETER LAKE	1. Boat in Camping	15
	2. Cascadia	22
	3. Cascadia Group	2

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HILLS CREEK LAKE	1. Black Canyon	75
	2. Casey's Riverside RV Park	55
	3. Sand Prairie	21
	4. Packard Creek	33
LOOKOUT POINT LAKE OR	1. Ivan Oakes	24
Total	25	876

¹ (USFS No Date-c through USFS No Date-m; OSP Linn County No Date-a)

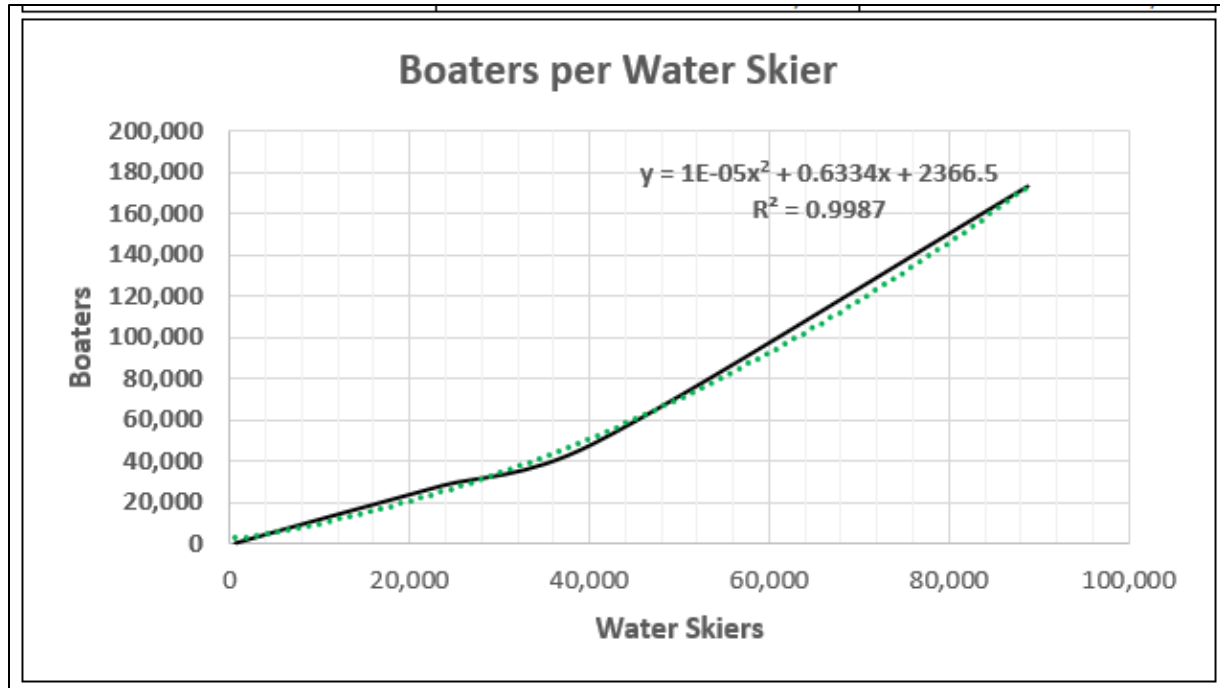
Other visitation categories where data was unavailable included boater and water skiers for some areas. For the water skiers, the same ratio methodology described in the preceding paragraph was used to calculate a .62 water skier per boater ratio. To estimate boaters where no data was available, the following table of known values and Figure 1-1 were created that shows the polynomial equation used to estimate the unknown number of boaters where only water skier data is available.

Table 1-1 Water Skiers and Boater User Estimates.

Reservoir	Water Skier VERS Estimate	Boater VERS Estimate
BLUE RIVER LAKE	28	46
LOOKOUT POINT LAKE	9,122	14,768
DORENA LAKE	15,961	25,840
DEXTER LAKE	30,148	48,808
FERN RIDGE LAKE	43,477	70,387
TOTAL	98,736	159,849

(USACE 2022e, USACE 2022p, USACE 2022j, USACE 2022i, USACE 2022l)

The chart below was constructed using the data shown in Table 1-1.



(USACE 2016e, USACE 2016p, USACE 2016j, USACE 2016i, USACE 2016l)

Figure 1-1. Boater Visitation Regression.

Estimating visitations in general and particularly by activity is a difficult task for any agency given the limitations of human resources that typically serve the public better in other ways such as keeping facilities clean and safe. Methodologies are continually being improved upon using non-human tools to gather data. This means that visitation data is not always consistent or complete. The important concept for this analysis is that the data is consistent across the alternatives and therefore provides a relative comparison between them.

For this analysis, 2016 visitation numbers were indexed to approximate 2022 values using Lane, Linn, and Marion County population change data from the U.S. Census Bureau. The table below shows data that was used for indexing visitation values to approximate 2022 levels.

Table 1-2. County Population Change Rate from 2016 to 2021.

	2016 Population Estimate	2022 Population Estimate	2016 to 2021 Index
Lane County	369,519	381,181	1.032
Linn County	122,814	130,467	1.062
Marion County	336,316	346,741	1.031

(USCB 2016, USCB 2022e)

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The following tables show visitation estimates for WVS reservoirs included in the recreation effects analysis. Visitation figures are shown at the published 2016 values, as well as the indexed 2021 values.

Table 1-3. Annual Visitation Estimates – Green Peter Lake.

GREEN PETER LAKE	2016 Estimated Visits ¹	2022Estimated Visits ²
Picnickers	11,493	9,059
Campers	9,092	11,711
Swimmers	15,390	13,074
Water Skiers	19,185	10,488
Boaters	15,673	16,979
Sightseers	57,073	12,591
Anglers	41,809	10,077
Other	1,265	533

¹ Source: (USACE 2022n)

² Estimated adjusted visits are indexed from 2016 to 2021 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

Table 1-4. Annual Visitation Estimates – Cottage Grove Lake.

COTTAGE GROVE LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	57,125	25,790
Campers	3,323	30,585
Swimmers	49,990	29,841
Water Skiers	55,532	43,569
Boaters ³	0	70,537
Sightseers	27,012	25,272
Anglers	43,010	20,691
Other	9,115	6,111

¹ Source: (USACE 2022f)

² Estimated adjusted visits are indexed from 2016 to 2021 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

³ Number of boaters are estimated for 2021 using regression analysis as described in Section 1.1 of Technical this appendix.

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Table 1-5. Annual Visitation Estimates – Dorena Lake.

DORENA LAKE OR	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	34,778	20,539
Campers	11,751	34,144
Swimmers	24,108	35,022
Water Skiers	23,652	16,465
Boaters	28,595	26,656
Sightseers	17,403	31,946
Anglers	47,336	11,350
Others	6,759	39,636

¹ Source: (USACE 202016j)

² Estimated adjusted visits are indexed from 2016 to 2022 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

Table 1-6. Annual Visitation Estimates – Blue River Lake.

BLUE RIVER LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	1,501	2,472
Campers ³	0	22,715
Swimmers	627	789
Water Skiers	652	29
Boaters	687	47
Sightseers	8,033	4,342
Anglers	3,179	1,843
Others	428	1,178

¹ Source: (USACE 2016e)

² Estimated adjusted visits are indexed from 2016 to 2021 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

³ Number of campers are estimated for 2022 using GIS tools and data as well as local, county, and state data as described in Section 1.1 of this appendix.

Table 1-7. Annual Visitation Estimates – Cougar Lake.

COUGAR LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	5,963	5,489
Campers ³	1,378	5,389
Swimmers	3,908	1,768
Water Skiers	3,098	2,819
Boaters ⁴	0	4,564

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COUGAR LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Sightseers	18,428	11,006
Anglers	8,100	4,137
Others	1,106	2,653

¹ Source: (USACE 2016g)

² Estimated adjusted visits are indexed from 2016 to 2022 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

³ Number of campers are estimated for 2022 using GIS tools and data as well as local, county, and state data as described in Section 1.1 of this appendix.

⁴ Number of boaters are estimated for 2022 using regression analysis as described in Section 1.1 of this appendix -Recreation.

Table 1-8. Annual Visitation Estimates – Fern Ridge Lake.

FERN RIDGE LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	177,556	121,231
Campers	14,598	0
Swimmers	105,121	179,081
Water Skiers	88,722	44,849
Boaters	173,594	72,608
Sightseers	81,682	122,347
Anglers	118,870	38,007
Others	25,183	27,257

¹ Source: (USACE 2016l)

² Estimated adjusted visits are indexed from 2016 to 2022 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

Table 1-9. Annual Visitation Estimates – Fall Creek Lake.

FALL CREEK LAKE	2016 Estimated Visits ¹	2021 Estimated Visits ²
Picnickers	43,083	20,116
Campers ³	515	4,114
Swimmers	60,089	31,567
Water Skiers	47,595	11,595
Boaters	33,278	18,771
Sightseers	3,799	16,528
Anglers	26,883	12,130
Others	19	3,315

¹ Source: (USACE 2016k)

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² Estimated adjusted visits are indexed from 2016 to 2022 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

³ Number of campers are estimated for 2022 using GIS tools and data as well as local, county, and state data as described in Section 1.1 of this appendix.

Table 1-10. Annual Visitation Estimates – Lookout Point Lake.

LOOKOUT POINT LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	13,873	6,176
Campers ³	0	5,537
Swimmers	18,981	11,796
Water Skiers	8,369	9,410
Boaters	10,223	15,234
Sightseers	12,662	25,219
Anglers	30,011	6,241
Others	514	351

¹ Source: (USACE 2016p)

² Estimated adjusted visits are indexed from 2016 to 2021 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

³ Number of campers are estimated for 2022 using GIS tools and data as well as local, county, and state data as described in Section 1.1 of this appendix.

Table 1-11. Annual Visitation Estimates – Dexter Lake.

DEXTER LAKE	2016 Estimated Visits ¹	2021 Estimated Visits ²
Picnickers	32,872	35,939
Campers	0	0
Swimmers	29,608	53,376
Water Skiers	40,514	31,099
Boaters	49,026	50,348
Sightseers	28,375	124,132
Anglers	67,479	24,128
Others	1,861	8,011

¹ Source: (USACE 2016i)

² Estimated adjusted visits are indexed from 2016 to 2021 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

Table 1-12. Annual Visitation Estimates – Hills Creek Lake.

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HILLS CREEK LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	53	6,636
Campers ³	0	44,942
Swimmers	8	2,138
Water Skiers ⁴	0	6,795
Boaters ⁴	0	11,001
Sightseers	1,032	13,910
Anglers	335	5,001
Others	1	3,208

¹ Source: (USACE 2016o)

² Estimated adjusted visits are indexed from 2016 to 2022 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

³ Number of campers are estimated for 2022 using GIS tools and data as well as local, county, and state data as described in Section 1.1 of this appendix.

⁴ Number of boaters and water skiers are estimated for 2021 using regression analysis as described in Section 1.1 of this appendix.

Table 1-13. Annual Visitation Estimates – Foster Lake.

FOSTER LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	49,661	74,485
Campers	10,127	55,948
Swimmers	33,944	97,459
Water Skiers	27,806	36,308
Boaters	87,287	58,781
Sightseers	180,244	74,352
Anglers	63,465	37,676
Hunters	0	17,071

¹ Source: (USACE 2016m)

² Estimated adjusted visits are indexed from 2016 to 2021 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

Table 1-14. Annual Visitation Estimates – Detroit Lake

DETROIT LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Picnickers	16,979	4,514
Campers	20,992	106,433
Swimmers	15,218	1,455
Water Skiers	14,961	8,967

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DETROIT LAKE	2016 Estimated Visits ¹	2022 Estimated Visits ²
Boaters	0	14,518
Sightseers	38,991	15,098
Anglers	22,913	3,401
Hunters	5,596	2,182

¹ Source: (USACE 2016h)

² Estimated adjusted visits are indexed from 2016 to 2021 using data from U.S. Census Bureau 1-Year American Community Survey County level data. Source: (USCB 2016), (USCB 2022e)

³ Number of campers are estimated for 2021 using GIS tools and data as well as local, county, and state data as described in Section 1.1 of this appendix.

⁴ Number of boaters are estimated for 2022 using regression analysis as described in Section 1.1 of this appendix.

1.2 UNIT DAY VALUES

Unit Day Values (UDV) are determined each year by the USACE and represent a general dollar value that can be placed on a visit to a recreation facility. UDV's for this analysis are taken from USACE Economic Guidance Memorandum 22-03, "Unit Day Values for Recreation for Fiscal Year 2022" (USACE 2022-A), and are weighted per project by recreational experience, opportunity, carrying capacity, accessibility, and environmental. Weights per reservoir across these elements were provided by the USACE Recreation Budget Evaluation System (Rec-BEST). The table below shows an example of the UDV weightings for Detroit Reservoir.

Table 1-15. Unit Day Value General Recreation Scoring Example – Detroit Lake.

UDV Weight Description	Rating	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)
UDV1 Recreation Experience	4	Two general activities (0-4)	Several general activities (5-10)	Several general activities: one high quality value activity (11-16)	Several general activities: more than one high quality high activity (17-23)	Numerous high quality value activities; some general activities (24-30)
UDV2 Availability of Opportunity	2	Several within 1 hour travel time; a few within 30	Several within 1 hour travel time;	One or two within 1 hour travel time; none within 45	None within 1 hours travel time (11-14)	Non within 2 hours travel time (15-18)

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UDV Weight Description	Rating	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)	Scoring Criteria (Scoring range)
		minutes travel time (0-3)	none within 30 minutes travel time (4-6)	minutes travel time (7-10)		
UDV3 Carrying Capacity	4	Minimum facility for development for public health and safety (0-2)	Basic facility to conduct activities (3-5)	Adequate facilities to conduct without deterioration of the resource or activity experience (6-8)	Optimum facilities to conduction activity at site potential (9-11)	Ultimate facilities to achieve intent of selected alternative 12-14)
UDV4 Accessibility	12	Limited access by any means to site or within the site (0-3)	Fair access, poor quality roads to site; limited access within the site (4-6)	Fair access, fair road to site; fair access, good roads within the site (7-10)	Good access, good roads to site; fair access, good roads within the site (11-14)	Good access, high standard road to site; good access within the site (15-18)
UDV5 Environmental	6	Low esthetic factors that substantially lower quality (0-2)	Average esthetic quality: factors exist that lower quality to minor degree (3-6)	Above average esthetic quality: any limiting factors can be reasonable rectified (7-10)	High esthetic quality: no factors exist that lower quality (11-15)	Outstanding esthetic quality: no factors exist that lower quality (16-20)

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Note: Values separated by dashed parenthesis signify the point ranges in the UDV recreational experience scoring. For example, if the Environmental weight in the bottom row is judged to be “Average”, it can be given a score of between 3 and 6 (shown as (3-6) in table).

UDV's were also separate into two classes, General Hunting and Fishing, as well as General Recreation that includes picnickers, campers, swimmers, boaters, water skiers, and sightseers. The UDV dollar value between these two classes is somewhat different and is shown in Table 1-14 that is taken from EGM 20-03. The point values in the first column represent the scoring value total across the recreation experience, opportunity, carrying capacity, accessibility, and environmental categories. Point values are interpolated in one-point increments but for brevity are not shown below. For example, the Detroit Lake scoring in the table above totals to 28 points. This interpolates to a dollar value per visit of \$6.16 for General Recreation and \$8.00 for General Hunting and Fishing per the table below.

Table 1-16. Unit Day Value Dollar Values from EGM 20-03.

Point Values	General Recreation Values (\$)	General Fishing and Hunting Values
0	\$4.87	\$7.00
10	\$5.78	\$7.91
20	\$6.39	\$8.52
30	\$7.31	\$9.44
40	\$9.13	\$10.35
50	\$10.35	\$11.26
60	\$11.26	\$12.48
70	\$11.87	\$13.09
80	\$13.09	\$14.00
90	\$14.00	\$14.31
100	\$14.61	\$14.61

Applying separate UDV dollar values to the number of days boat ramps are usable versus unusable, as described in the Hydrologic Inputs and Recreation Effects on an Annual Basis sections of this appendix, requires an assumed percentage loss of visitation when boat ramps are unusable. These assumptions per recreational activity are based on professional judgement through discussions between PDT economists and were passed to USACE field recreation personnel for concurrence. The general rationale is that when boat ramps become unusable, a reservoir is less attractive to visitors both physically and esthetically because of low water levels that often expose steep bank terrain with little or no vegetation. The assumed loss per activity is shown in the table below.

Table 1-17. Assumed Percent Recreational Activity Lost when Boat Ramps are Unusable.

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Visitation Category	Percent Visitation Loss When Boat Ramps Unusable
Picnickers	25%
Campers	25%
Swimmers	25%
Water Skiers	100%
Boaters	90%
Sightseers	25%
Fishermen	90%
Hunters	0%

The final step toward applying a UDV to each day that a boat ramp is usable versus unusable during the peak recreation season of May 15 to September 15 was to calculate a total annual visitation value for each reservoir respectively, and then divide this number by the 124 days of the peak recreation season to derive a daily average UDV value. For example, Detroit Reservoir visitations for all activities tally up to 185,999, 156,574 of which are in the General Recreation category and 29,425 of which are in the General Hunting and Fishing category. Divided by 124, this equals a daily average of 1,263 and 237 for general recreation and general hunting and fishing visits, respectively. These daily visitation values were then multiplied by the \$6.58 and \$8.55 values per visit as discussed previously in this subsection, the products summed, and the sum divided by 124. This resulted in a daily UDV total for each reservoir. The results of the calculations described in this paragraph are shown in the tables below for each reservoir with and without boat ramp usability.

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Table 1-18. UDV Values by Reservoir with Boat Ramp Usability.

With Boat Ramp Usability									
Reservoir	Total Annual Visits	Annual Visits Gen Rec	Annual Visits Gen Hunt/Fish	UDV Gen Rec	UDV Gen Hunt/Fish	Total General Rec Value	Total Annual Gen Hunt/Fish Rec Value	Total Annual Rec Value	Daily Avg Rec Value
Green Peter	84,512	73,901	10,610	\$7.20	\$9.30	\$532,089	\$98,677	\$630,766	\$5,087
Cottage Grove	252,395	225,593	26,802	\$9.73	\$9.50	\$2,195,023	\$254,699	\$2,449,722	\$19,756
Dorena	215,758	164,772	50,986	\$10.00	\$10.89	\$1,647,719	\$555,236	\$2,202,955	\$17,766
Blue River	33,416	30,394	3,021	\$6.66	\$6.66	\$202,426	\$20,123	\$222,549	\$1,795
Cougar	37,825	31,035	6,790	\$7.13	\$9.26	\$221,282	\$62,873	\$284,155	\$2,292
Fern Ridge	605,380	540,116	65,264	\$8.22	\$9.90	\$4,439,754	\$646,111	\$5,085,865	\$41,015
Fall Creek	118,136	102,691	15,446	\$7.49	\$8.24	\$769,153	\$127,256	\$896,409	\$7,229
Lookout Point	79,963	73,372	6,592	\$8.39	\$9.80	\$615,588	\$64,598	\$680,186	\$5,485
Dexter	327,033	294,894	32,139	\$6.76	\$8.88	\$1,993,482	\$285,397	\$2,278,879	\$18,378
Hills Creek	93,632	85,423	8,209	\$7.13	\$9.23	\$609,064	\$75,770	\$684,835	\$5,523
Foster	452,080	397,333	54,747	\$9.62	\$10.71	\$3,822,343	\$586,345	\$4,408,688	\$35,554
Detroit	156,567	150,984	5,583	\$7.13	\$9.26	\$1,076,517	\$51,697	\$1,128,214	\$9,099
Total	2,456,697	2,170,508	286,189			18,124,441	2,828,782	20,953,223	168,978

Table 1-19. UDV Values by Reservoir Without Boat Ramp Usability.

Without Boat Ramp Usability									
Reservoir	Total Annual Visits	Annual Visits Gen Rec	Annual Visits Gen Hunt/Fish	UDV Gen Rec	UDV Gen Hunt/Fish	Total General Rec Value	Total Annual Gen Hunt/Fish Rec Value	Total Annual Rec Value	Daily Avg Rec Value
Green Peter	Green Peter	38,065	36,524	1,541	\$7.20	\$9.30	\$262,973	\$14,331	\$277,304
Cottage Grove	Cottage Grove	98,850	90,670	8,180	\$9.73	\$9.50	\$882,215	\$77,735	\$959,950
Dorena	Dorena	134,675	93,904	40,771	\$10.00	\$10.89	\$939,044	\$443,992	\$1,383,037
Blue River	Blue River	24,105	22,743	1,362	\$6.66	\$6.66	\$151,468	\$9,073	\$160,541
Cougar	Cougar	21,262	18,195	3,067	\$7.13	\$9.26	\$129,731	\$28,399	\$158,130
Fern Ridge	Fern Ridge	355,313	324,255	31,058	\$8.22	\$9.90	\$2,665,377	\$307,470	\$2,972,847
Fall Creek	Fall Creek	60,649	56,121	4,528	\$7.49	\$8.24	\$420,344	\$37,310	\$457,654

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Without Boat Ramp Usability									
Reservoir	Total Annual Visits	Annual Visits Gen Rec	Annual Visits Gen Hunt/Fish	UDV Gen Rec	UDV Gen Hunt/Fish	Total General Rec Value	Total Annual Gen Hunt/Fish Rec Value	Total Annual Rec Value	Daily Avg Rec Value
Lookout Point	Lookout Point	39,044	38,069	975	\$8.39	\$9.80	\$319,401	\$9,553	\$328,954
Dexter	Dexter	175,543	165,120	10,424	\$6.76	\$8.88	\$1,116,208	\$92,564	\$1,208,772
Hills Creek	Hills Creek	55,528	51,820	3,708	\$7.13	\$9.23	\$369,474	\$34,227	\$403,701
Foster	Foster	253,400	232,561	20,839	\$9.62	\$10.71	\$2,237,239	\$223,186	\$2,460,425
Detroit	Detroit	99,598	97,076	2,522	\$7.13	\$9.26	\$692,154	\$23,351	\$715,505
Total	Total	1,356,032	1,227,058	128,975			10,185,628	1,301,192	11,486,821

The Daily Total UDV values shown in the tables above were multiplied by the number of boat ramp usable and non-usable days during the peak recreation season for each year of the period of record. More details on this methodology are provided in the Recreation Effects on an Annual Basis section of this appendix.

1.3 HYDROLOGIC INPUTS

Daily reservoir pool elevation data for each of 83 water years from the HEC-ResSim model was used to determine the percentage of time that boat ramps were available during the peak recreation season of May 15 through September 15. A boat ramp was considered to be usable when the ramp elevation fell below the reservoir pool elevation and unusable when the boat ramp elevation was above the pool elevation. Even though this may not always be exactly the case, as there may be locations where towing vehicles can travel below the boat ramp to launch vessels into the water, it provides an equal comparison across all alternatives. The charts below show examples for Lookout Point Reservoir of how each alternative pool elevation scenario compares to boat ramp elevations during the peak recreation season using 5-number summary statistics compiled from the 83-year water year period of record. The charts are based on non-exceedance probability data. For example, the P25 (Dry Year) chart is saying that “25 percent of the time the pool elevation will not exceed these values and 75 percent of the time it will exceed these values.”

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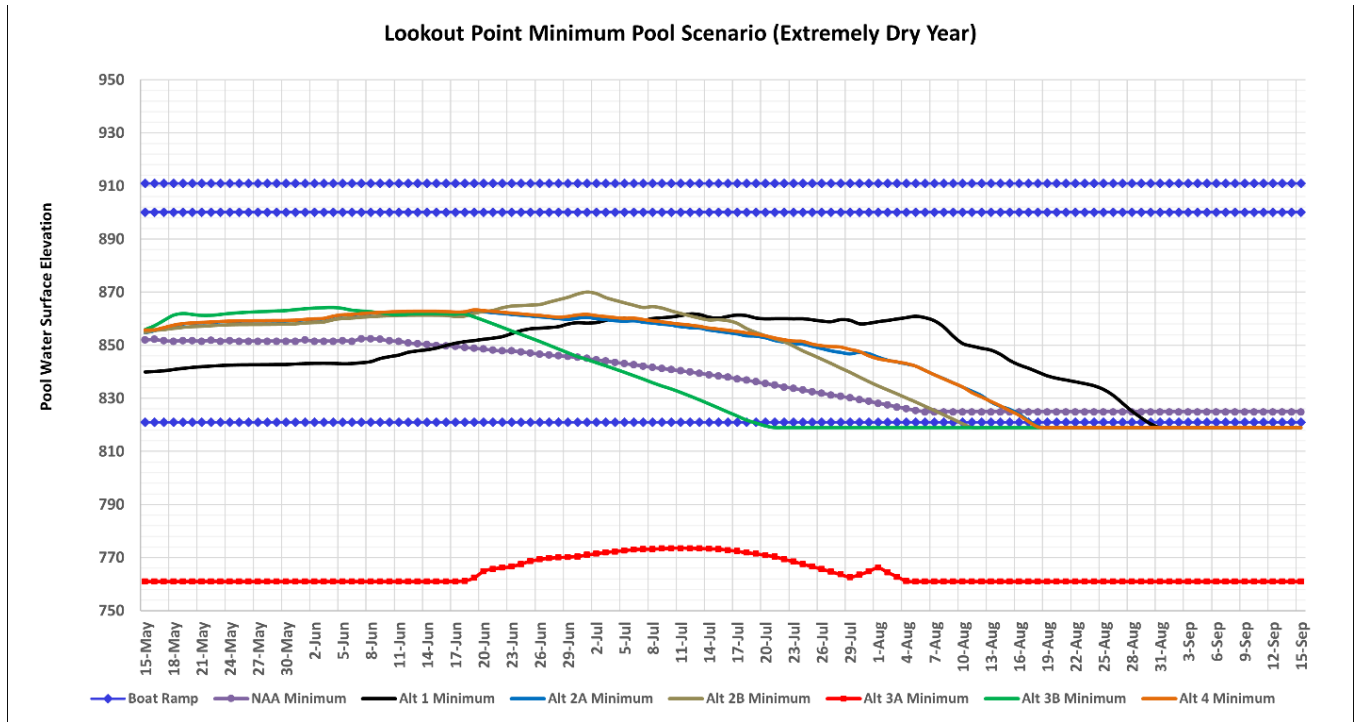
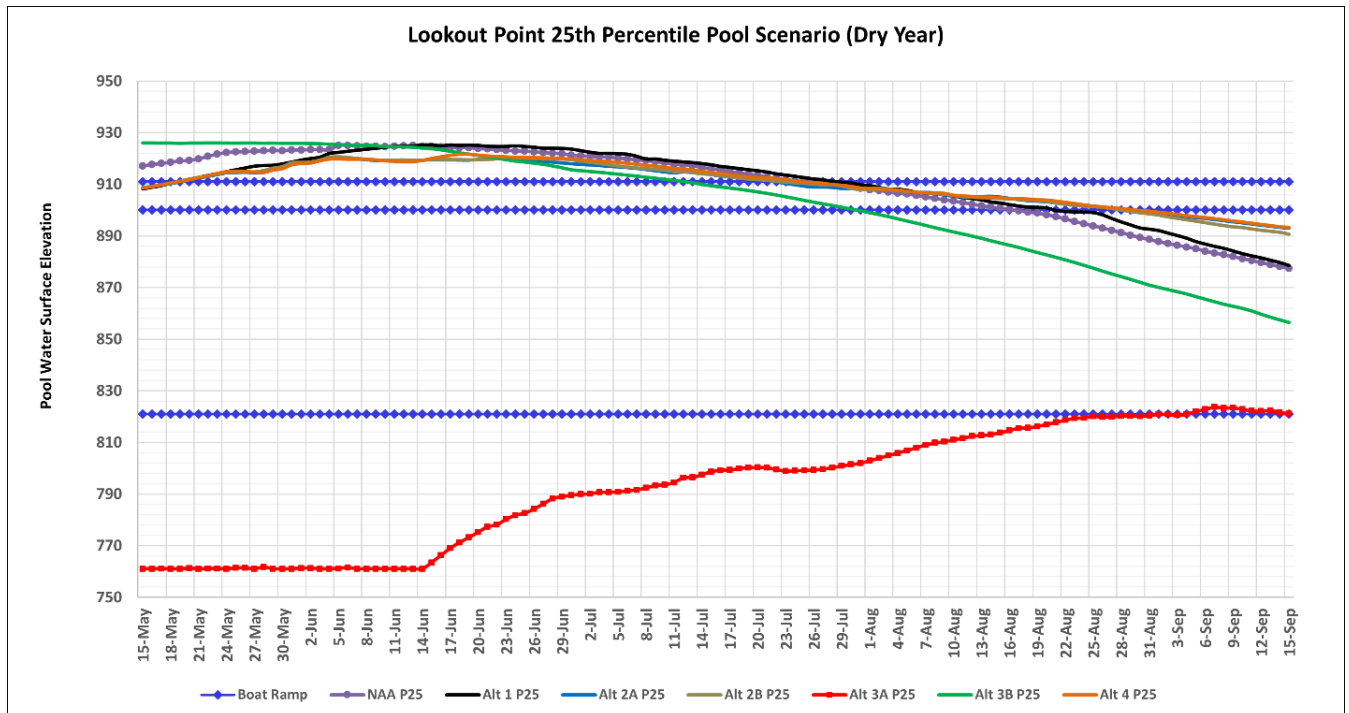
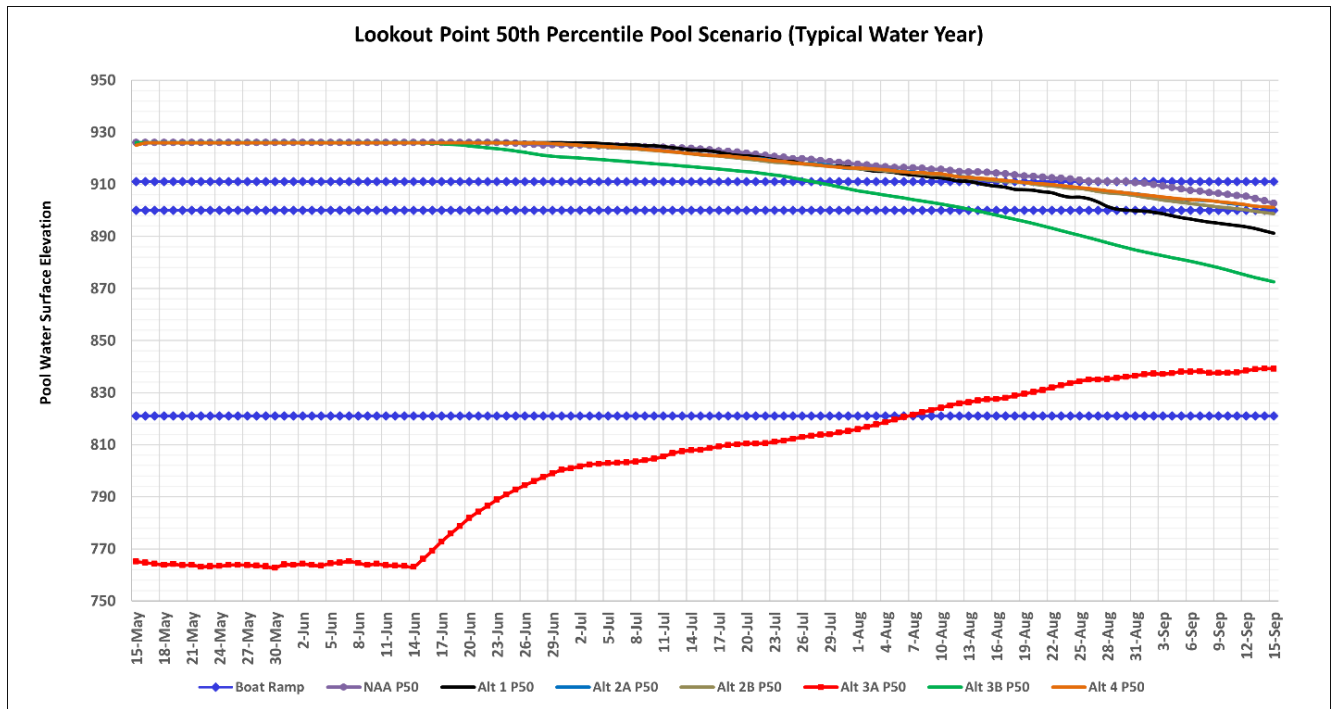


Figure 1-2. Boat Ramp Estimated Availability Chart – Extremely Dry Year – Lookout Point Reservoir.



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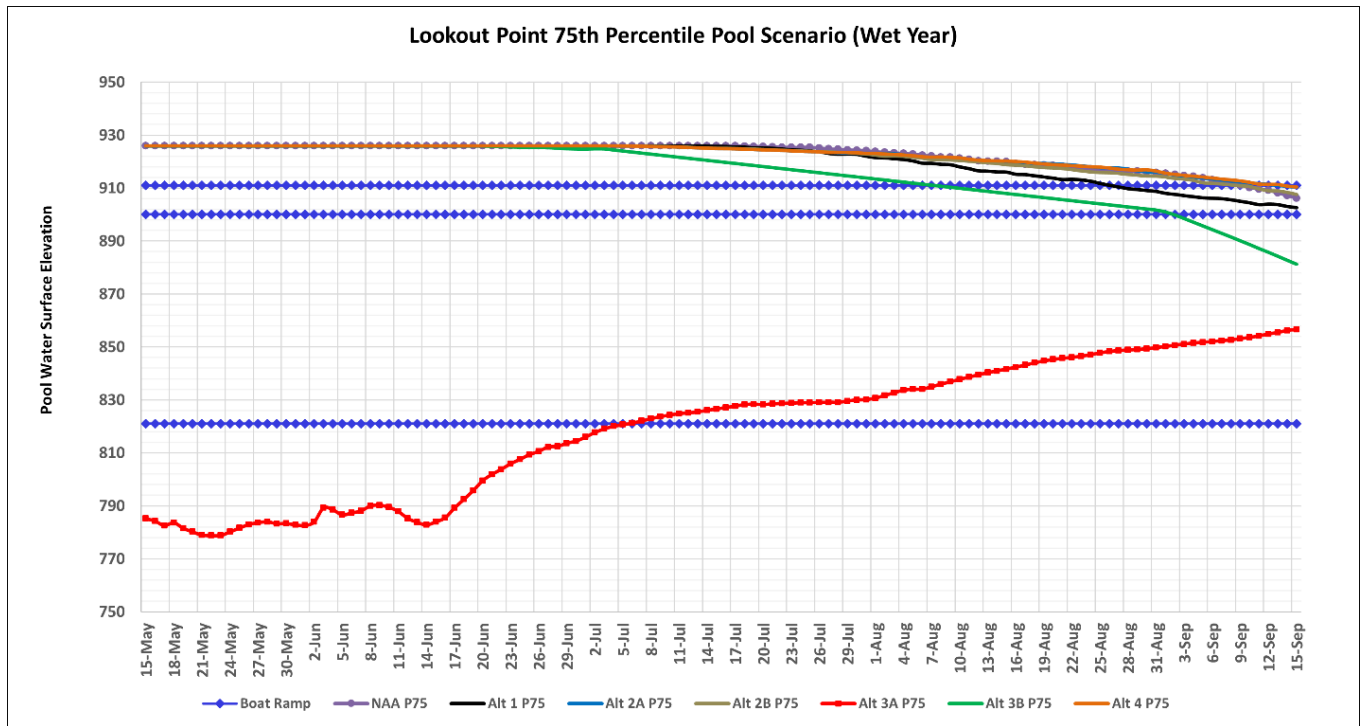
Figure 1-3. Boat Ramp Estimated Availability Chart – Dry Year – Lookout Point Reservoir.



Note: Preferred Alternative 5 is the same as Alternative 2B

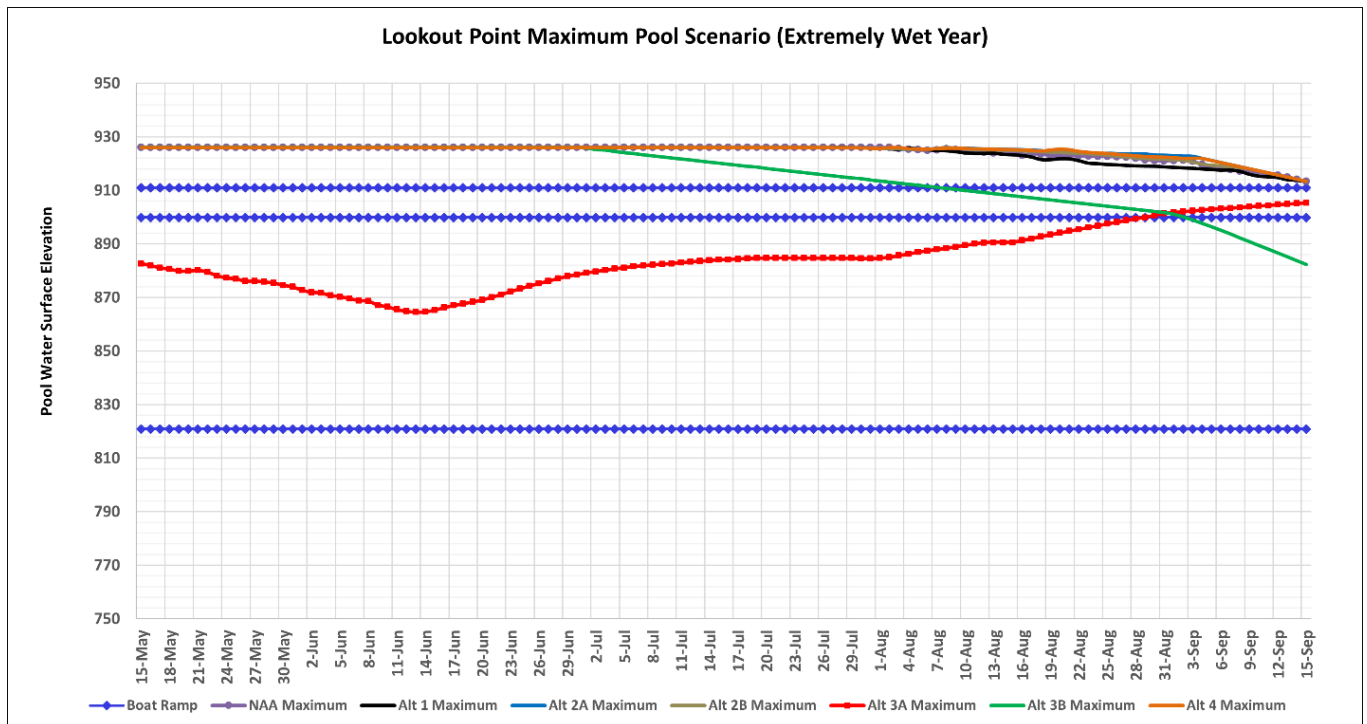
Figure 1-4 Boat Ramp Estimated Availability Chart – Median Year – Lookout Point Reservoir.

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Note: Preferred Alternative 5 is the same as Alternative 2B

Figure 1-5. Boat Ramp Estimated Availability Chart – Wet Year – Lookout Point Reservoir.



Note: Preferred Alternative 5 is the same as Alternative 2B

Figure 1-6. Boat Ramp Estimated Availability Chart – Extremely Wet Year – Lookout Point Reservoir.

Alternative 3A is shown on the red line in the charts above and stands out as falling below the lowest boat ramp elevation much of the time. This is indicative of Measure 720 where low elevation outlets could be used to pass fish in spring by delaying refill of reservoirs each year until June 15.

CHAPTER 2 - RECREATION EFFECTS – NATIONAL ECONOMIC DEVELOPMENT

2.1 ASSUMPTIONS

The following assumptions were used for this analysis:

1. The peak recreation season at reservoirs is May 15 to September 15 each year.
2. The majority of recreation visits to reservoirs occur during the peak recreation season. No attempt was made to separate annual visitation data into separate time periods. All visits are binned into the peak recreation season.
3. A boat ramp is considered usable if its elevation falls below the water surface elevation of the reservoir and was considered unusable if its elevation is above the water surface elevation of the reservoir.
4. The general assumption for this analysis is that when reservoir water levels are low enough to prevent boat launching safely via constructed boat ramps, it would discourage the public from going to the reservoir for both the physical and esthetic reasons. However, people who do choose to visit a reservoir for recreational purposes when water levels are low value the experience and create the same economic activity as they would any other time.
5. For riverine recreation areas, water flows that are consistent with past flows are directly related to the amount of utility most river recreationists enjoy.

2.2 METHODOLOGY

To estimate the annual effects of each of the alternatives on recreation, each of the 83 simulated water year outputs from HEC-ResSim were compared to each boat ramp to calculate an annual availability of the ramps based on whether the boat ramp elevation was above or below the daily pool elevation. The availability of individual ramps at each reservoir were then averaged with each other to determine the average annual availability for each reservoir. The annual average number of available (aka “usable”) and unavailable (aka “unusable”) days were multiplied appropriately by the UDV Daily Average Recreation Values figures shown in far-right column in Table 1-16 of this appendix. Summing the products of annual usable/unusable day visitations and annual usable/unusable average daily UDV values provides recreation benefit estimates in dollar terms, that are then averaged across all reservoir boat ramps to determine the average annual recreation benefit for the reservoir. It should be noted that even though

visitation overall decreases in some alternatives, the UDV values for the reservoirs with positive visitation impacts are higher than the UDV values at the reservoirs negatively impacted.

2.3 AVERAGE ANNUAL EFFECTS

Results examples from the annual effects to recreation analysis are shown in Table 2-1 and Table 2-2.

Table 2-1. Average Annual Recreation Value Example – Hills Creek Reservoir – Alternative 1.

Sub-basin	Reservoir	Boat Ramp	Elevation (NAVD 88)	Avg. Annual Usable Days ¹	Avg. Annual Unusable Days ¹	Avg. Daily Rec Value – Usable Days	Avg. Daily Rec Value – Unusable Days	Average Annual Rec Benefit
Middle Fork Willamette	Hills Creek	Bingham Landing	1520	85.23	38.77	124.00	5522.86	3255.65
Middle Fork Willamette	Hills Creek	CT Beach Park	1507	100.70	23.30	124.00	5522.86	3255.65
Middle Fork Willamette	Hills Creek	Packard Creek	1441	120.46	3.54	124.00	5522.86	3255.65
		Average		102.13	21.87		5522.86	3255.65

Note: Because table values are rounded to two digits, Avg Annual Rec Benefits may not calculate exactly equal to what is shown.

¹ Averaged across 83 water years using HEC-ResSim model pool elevation data and NWP District boat ramp elevation data.

Average Annual Effects

Results examples from the annual effects to recreation analysis are shown in Table 2-1 and Table 2-2.

Table 2-1 for Hills Creek Alternative 1 were calculated for each alternative/reservoir combination. The action alternatives were then compared to the no action alternative to estimate the change in value (aka “benefits”) that is anticipated to occur under each alternative scenario. Table 2-2 shows an example of all economic values across all alternatives for Hills Creek Reservoir.

Table 2-2. Average Annual Recreation Benefits Example – Hills Creek Reservoir – All Alternatives.

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Figures in Thousands	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	59	63	64	63	59	47	64	60
Change in Visits from No Action	0	4	5	4	0	-12	5	1
Total Annual Benefits	\$30,211	\$32,399	\$32,555	\$32,042	\$30,258	\$24,009	\$32,560	\$30,880
Average Annual Benefits	\$364	\$390	\$392	\$386	\$365	\$289	\$392	\$372
Change in Benefits from No Action	\$0	\$26	\$28	\$22	\$1	-\$75	\$28	\$8
Percent Change from No Action Benefits	0.00%	7.25%	7.75%	6.04%	0.16%	-20.52%	7.77%	2.20%
Effects Scale ¹	None	Moderate	Moderate	Moderate	None	Major	Moderate	Minor

¹ Effects Scale descriptions shown in Table 2-3

Note: Because table values are rounded, other dependent values may not calculate exactly equal to what is shown.

The effects scale used in this analysis is shown in Table 2-3.

Table 2-3. Recreation Degree of Effect.

Degree of Adverse or Beneficial Effect	Criteria
None/ Negligible	Effects are not measurable or change <1% from the No Action Alternative
Minor	Effects change from 1% to 5% (+/-) from the No Action Alternative
Moderate	Effects change from 5% to 20% (+/-) from the No Action Alternative
Major	Effects change more than 20% (+/-) from the No Action Alternative

CHAPTER 3 - UNCERTAINTY IN RESERVOIR RECREATION ANALYSIS RESULTS

Uncertainty in the average annual visitors and total recreation value results were measured utilizing the variability in the HEC-ResSim model outputs. HEC-ResSim outputs several stage and

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flow statistical values based on individual Monte Carlo simulation results. These statistics range from simulated minimum to maximum values. The 25th percentile leans toward the minimum value and represents a drier year, while the 75th percentile leans toward the maximum value and represents a wetter year. These statistics were used to construct the charts in Figure 1-2 Through Figure 1-6 as well as Table 3-1 and Table 3-3 below.

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Table 3-1. Annual Visitation Uncertainty Statistics – All Reservoirs - All Alternatives.

Reservoir	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Green Peter	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 4
–	25 Percentile	82,062	83,614	78,601	78,601	78,604	37,866	78,689	78,722
–	Average	82,607	84,038	79,719	79,719	79,721	38,724	79,830	79,830
–	Median	82,860	84,265	80,088	80,088	80,090	38,680	80,186	80,179
–	75 th Percentile	83,297	84,521	81,020	81,020	81,022	39,735	81,122	81,125
Cottage Grove	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	237,056	242,470	242,446	242,023	238,405	240,501	242,092	242,040
–	Average	237,782	243,183	243,093	242,713	239,296	241,296	242,758	242,758
–	Median	238,092	243,511	243,356	243,006	239,729	241,633	243,037	243,069
–	75 th Percentile	238,628	244,026	243,851	243,517	240,330	242,223	243,537	243,591
Dorena	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	198,286	207,066	204,500	204,104	202,263	203,965	204,228	204,143
–	Average	199,119	207,848	205,238	204,896	203,268	204,844	204,986	204,986
–	Median	199,333	208,214	205,402	205,096	203,615	205,094	205,172	205,184
–	75 th Percentile	200,012	208,788	206,136	205,847	204,467	205,898	205,911	205,962
Blue River	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	31,143	31,982	32,053	31,923	30,860	23,810	23,974	23,944
–	Average	31,342	32,196	32,229	32,120	31,187	24,105	24,105	24,105
–	Median	31,444	32,320	32,333	32,237	31,334	24,153	24,183	24,196
–	75 th Percentile	31,561	32,444	32,435	32,348	31,578	24,321	24,259	24,287
Cougar	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	33,838	35,716	35,684	20,741	21,143	20,739	35,737	35,019
–	Average	34,061	36,027	35,916	21,262	21,262	21,262	35,971	35,971
–	Median	34,191	36,188	36,010	21,472	21,288	21,473	36,066	36,357
–	75 th Percentile	34,298	36,360	36,182	21,683	21,331	21,683	36,236	36,726
Fern Ridge	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	596,720	596,631	596,631	596,631	596,631	596,631	596,631	596,631
–	Average	597,787	597,702	597,702	597,702	597,702	597,702	597,702	597,702
–	Median	598,090	598,002	598,002	598,002	598,002	598,002	598,002	598,002

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Reservoir	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	75 th Percentile	598,923	598,841	598,841	598,841	598,841	598,841	598,841	598,841
Fall Creek	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	109,799	111,021	111,409	111,272	110,790	110,961	111,534	110,915
–	Average	110,169	111,407	111,728	111,612	111,178	111,340	111,854	111,262
–	Median	110,408	111,655	111,958	111,847	111,420	111,584	112,086	111,505
–	75 th Percentile	110,669	111,922	112,179	112,081	111,698	111,848	112,307	111,739
Lookout Point	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	70,996	69,658	70,741	70,106	42,429	65,483	70,830	70,816
–	Average	71,511	70,110	71,162	70,572	43,806	66,471	71,256	71,333
–	Median	71,767	70,452	71,363	70,810	43,992	66,853	71,456	71,546
–	75 th Percentile	72,096	70,727	71,680	71,130	44,931	67,664	71,775	71,915
Dexter	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
–	Average	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
–	Median	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
–	75 th Percentile	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
Hills Creek	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
–	Average	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
–	Median	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
–	75 th Percentile	327,033	327,033	327,033	327,033	327,033	327,033	327,033	327,033
Foster	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	450,551	452,080	452,080	452,080	452,081	403,055	452,080	452,080
–	Average	450,653	452,080	452,080	452,080	452,080	406,143	452,080	452,080
–	Median	450,701	452,080	452,080	452,080	452,081	407,768	452,080	452,080
–	75 th Percentile	450,756	452,080	452,080	452,080	452,081	409,218	452,080	452,080
Detroit	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	144,206	149,986	142,989	142,989	99,141	138,185	142,985	142,989
–	Average	144,560	150,279	143,641	143,641	99,695	139,028	143,636	143,641
–	Median	144,729	150,485	143,914	143,913	99,760	139,374	143,909	143,913

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Reservoir	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	75 th Percentile	145,042	150,656	144,396	144,394	100,039	140,057	144,389	144,394

Table 3-2. Annual Visitation Uncertainty Statistics – Total for All Reservoirs - All Alternatives.

Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
25 Percentile	2,363,414	2,393,416	2,380,965	2,363,055	2,280,376	2,236,165	2,372,624	2,367,331
Average	2,368,663	2,398,815	2,386,800	2,369,466	2,288,372	2,246,177	2,378,479	2,374,228
Median	2,370,854	2,401,481	2,388,906	2,371,890	2,290,886	2,249,967	2,380,583	2,376,790
75 th Percentile	2,374,674	2,405,090	2,393,620	2,376,745	2,296,782	2,256,936	2,385,288	2,381,839

Table 3-3 shows uncertainty statistics for all reservoirs combined for each of the proposed alternatives. There is ~.5% difference between the 25th and 75th percentile interquartile values for each alternative. This indicates that there is minimal uncertainty in the pool elevation at the reservoirs when operating according to the rule curve, assuming that there is adequate natural water to supply sufficient reservoir inflows.

Table 3-3. Annual Recreation Value Uncertainty Statistics – All Reservoirs - All Alternatives.

Reservoir	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Green Peter	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$612,209	\$623,996	\$585,962	\$585,962	\$585,979	\$276,061	\$586,632	\$586,875
–	Average	\$616,273	\$627,160	\$594,293	\$594,293	\$594,310	\$282,318	\$595,135	\$595,135
–	Median	\$618,156	\$628,854	\$597,041	\$597,041	\$597,059	\$281,996	\$597,790	\$597,738
–	75 th Percentile	\$621,421	\$630,762	\$603,993	\$603,993	\$604,010	\$289,690	\$604,767	\$604,791
Cottage Grove	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$2,300,895	\$2,353,417	\$2,353,189	\$2,349,079	\$2,313,981	\$2,334,314	\$2,349,748	\$2,349,252
–	Average	\$2,307,939	\$2,360,339	\$2,359,470	\$2,355,779	\$2,322,631	\$2,342,028	\$2,356,214	\$2,356,214
–	Median	\$2,310,946	\$2,363,521	\$2,362,016	\$2,358,622	\$2,326,825	\$2,345,301	\$2,358,924	\$2,359,238
–	75 th Percentile	\$2,316,146	\$2,368,521	\$2,366,827	\$2,363,582	\$2,332,661	\$2,351,032	\$2,363,780	\$2,364,300
Dorena	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$2,026,190	\$2,114,978	\$2,089,037	\$2,085,028	\$2,066,385	\$2,083,611	\$2,086,291	\$2,085,422
–	Average	\$2,034,702	\$2,122,971	\$2,096,575	\$2,093,123	\$2,076,659	\$2,092,592	\$2,094,026	\$2,094,026
–	Median	\$2,036,892	\$2,126,704	\$2,098,255	\$2,095,166	\$2,080,200	\$2,095,144	\$2,095,926	\$2,096,055

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Reservoir	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	75 th Percentile	\$2,043,825	\$2,132,570	\$2,105,755	\$2,102,835	\$2,088,909	\$2,103,366	\$2,103,484	\$2,103,997
Blue River	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$207,414	\$212,997	\$213,474	\$212,606	\$205,529	\$158,574	\$213,545	\$213,282
–	Average	\$208,737	\$214,427	\$214,644	\$213,918	\$207,704	\$160,541	\$214,717	\$214,717
–	Median	\$209,414	\$215,252	\$215,335	\$214,696	\$208,683	\$160,861	\$215,406	\$215,521
–	75 th Percentile	\$210,197	\$216,076	\$216,016	\$215,439	\$210,306	\$161,980	\$216,089	\$216,331
Cougar	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$253,844	\$268,139	\$267,887	\$154,253	\$157,243	\$154,243	\$268,292	\$262,901
–	Average	\$255,514	\$270,477	\$269,632	\$158,130	\$158,130	\$158,130	\$270,049	\$270,049
–	Median	\$256,489	\$271,685	\$270,335	\$159,694	\$158,321	\$159,698	\$270,758	\$272,945
–	75 th Percentile	\$257,295	\$272,971	\$271,625	\$161,260	\$158,646	\$161,265	\$272,037	\$275,713
Fern Ridge	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$5,012,743	\$5,011,995	\$5,011,995	\$5,011,995	\$5,011,995	\$5,011,995	\$5,011,995	\$5,011,995
–	Average	\$5,021,706	\$5,020,988	\$5,020,988	\$5,020,988	\$5,020,988	\$5,020,988	\$5,020,988	\$5,020,988
–	Median	\$5,024,251	\$5,023,509	\$5,023,509	\$5,023,509	\$5,023,509	\$5,023,509	\$5,023,509	\$5,023,509
–	75 th Percentile	\$5,031,249	\$5,030,561	\$5,030,561	\$5,030,561	\$5,030,561	\$5,030,561	\$5,030,561	\$5,030,561
Fall Creek	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$832,795	\$842,122	\$845,084	\$844,039	\$840,359	\$841,662	\$846,036	\$845,815
–	Average	\$835,603	\$845,053	\$847,497	\$846,616	\$843,305	\$844,542	\$848,464	\$848,464
–	Median	\$837,413	\$846,932	\$849,248	\$848,399	\$845,138	\$846,387	\$850,219	\$850,313
–	75 th Percentile	\$839,392	\$848,958	\$850,920	\$850,170	\$847,247	\$848,395	\$851,901	\$852,096
Lookout Point	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$603,256	\$593,709	\$604,529	\$599,543	\$348,447	\$556,944	\$605,241	\$604,474
–	Average	\$607,633	\$597,557	\$608,128	\$603,529	\$359,754	\$565,341	\$608,887	\$608,887
–	Median	\$609,812	\$600,476	\$609,848	\$605,562	\$361,283	\$568,593	\$610,592	\$610,705
–	75 th Percentile	\$612,603	\$602,817	\$612,551	\$608,299	\$368,991	\$575,488	\$613,321	\$613,855
Dexter	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879
–	Average	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879
–	Median	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879

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Reservoir	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	75 th Percentile	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879	\$2,278,879
Hills Creek	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$596,991	\$629,756	\$634,426	\$625,254	\$591,690	\$495,280	\$634,541	\$633,829
–	Average	\$599,300	\$635,248	\$637,806	\$629,375	\$600,065	\$497,412	\$637,879	\$637,879
–	Median	\$600,527	\$637,911	\$638,608	\$630,768	\$602,992	\$498,081	\$638,666	\$639,395
–	75 th Percentile	\$601,642	\$640,951	\$641,671	\$634,160	\$609,478	\$498,755	\$641,741	\$642,612
Foster	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$4,393,734	\$4,408,688	\$4,408,688	\$4,408,688	\$4,408,695	\$3,929,107	\$4,408,688	\$4,408,688
–	Average	\$4,394,724	\$4,408,688	\$4,408,688	\$4,408,688	\$4,408,688	\$3,959,211	\$4,408,688	\$4,408,688
–	Median	\$4,395,193	\$4,408,688	\$4,408,688	\$4,408,688	\$4,408,695	\$3,975,049	\$4,408,688	\$4,408,688
–	75 th Percentile	\$4,395,732	\$4,408,688	\$4,408,688	\$4,408,688	\$4,408,695	\$3,989,185	\$4,408,688	\$4,408,688
Detroit	Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
–	25 Percentile	\$1,038,691	\$1,080,548	\$1,029,880	\$1,029,877	\$712,231	\$995,080	\$1,029,844	\$1,029,843
–	Average	\$1,041,242	\$1,082,661	\$1,034,575	\$1,034,569	\$716,210	\$1,001,156	\$1,034,535	\$1,034,535
–	Median	\$1,042,458	\$1,084,147	\$1,036,536	\$1,036,533	\$716,674	\$1,003,648	\$1,036,500	\$1,036,499
–	75 th Percentile	\$1,044,714	\$1,085,380	\$1,040,010	\$1,039,997	\$718,677	\$1,008,563	\$1,039,961	\$1,039,962

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Table 3-4. Annual Recreation Value Uncertainty Statistics – Total for All Reservoirs - All Alternatives.

Statistic	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
25 Percentile	\$20,157,640	\$20,419,225	\$20,323,030	\$20,185,204	\$19,521,412	\$19,115,749	\$20,319,734	\$20,311,256
Average	\$20,202,251	\$20,464,447	\$20,371,176	\$20,237,888	\$19,587,322	\$19,203,138	\$20,368,458	\$20,368,458
Median	\$20,220,429	\$20,486,557	\$20,388,297	\$20,257,555	\$19,608,258	\$19,237,145	\$20,385,856	\$20,389,485
75 th Percentile	\$20,253,093	\$20,517,135	\$20,427,495	\$20,297,861	\$19,657,061	\$19,297,158	\$20,425,208	\$20,431,785

Table 3-4 shows uncertainty statistics for all reservoirs combined for each of the proposed alternatives. There is ~.5% difference between the 25th and 75th percentile interquartile values for each alternative. This indicates that there is minimal uncertainty in the pool elevation at the reservoirs when operating according to the rule curve, assuming that there is adequate natural water to supply sufficient reservoir inflows.

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Table 3-5 through Table 3-23 below display the results in which the Chapter 3 environment consequences discussions are based on.

Table 3-5. Recreation Results by Reservoir – Detroit Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	145	150	144	144	100	139	144	144
Change in Visits from No Action	0	6	-1	-1	-45	-6	-1	-1
Total Annual Benefits	\$86,423	\$89,861	\$85,870	\$85,869	\$59,445	\$83,096	\$85,866	\$85,869
Average Annual Benefits	\$1,041	\$1,083	\$1,035	\$1,035	\$716	\$1,001	\$1,035	\$1,035
Change in Benefits from No Action	\$0	\$42	-\$7	-\$7	-\$325	-\$40	-\$7	-\$7
Percent Change in Benefits from No Action	0.00%	3.99%	-0.63%	-0.63%	-31.21%	-3.84%	-0.64%	-0.63%
Effects Scale	None	Minor	None	None	Major	Minor	None	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

Effects Scales are described in Table 2-3 of this appendix.

Table 3-6. Recreation Results by Reservoir – Foster Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	451	452	452	452	452	406	452	452
Change in Visits from No Action	0	1	1	1	1	-45	1	1

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Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Total Annual Benefits	\$364,762	\$365,921	\$365,921	\$365,921	\$365,921	\$328,615	\$365,921	\$365,921
Average Annual Benefits	\$4,395	\$4,409	\$4,409	\$4,409	\$4,409	\$3,959	\$4,409	\$4,409
Change in Benefits from No Action	\$0	\$14	\$14	\$14	\$14	-\$436	\$14	\$14
Percent Change in Benefits from No Action	0.00%	0.32%	0.32%	0.32%	0.32%	-9.91%	0.32%	0.32%
Effects Scale	None	None	None	None	None	Moderate	None	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-7. Recreation Results by Reservoir – Green Peter Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	83	84	80	80	80	39	80	80
Change in Visits from No Action	0	1	-3	-3	-3	-44	-3	-3
Total Annual Benefits	\$51,151	\$52,054	\$49,326	\$49,326	\$49,328	\$23,432	\$49,396	\$49,349
Average Annual Benefits	\$616	\$627	\$594	\$594	\$594	\$282	\$595	\$595
Change in Benefits from No Action	\$0	\$11	-\$22	-\$22	-\$22	-\$334	-\$21	-\$22
Percent Change in Benefits from No Action	0.00%	1.77%	-3.57%	-3.57%	-3.57%	54.19%	-3.44%	-3.52%
Effects Scale	None	Minor	Minor	Minor	Minor	Major	Minor	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-8. Recreation Results by Reservoir – Cougar Reservoir.

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Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	34	36	36	21	21	21	36	21
Change in Visits from No Action	0	2	2	-13	-13	-13	2	-13
Total Annual Benefits	\$21,208	\$22,450	\$22,379	\$13,125	\$13,125	\$13,125	\$22,414	\$13,125
Average Annual Benefits	\$256	\$271	\$270	\$158	\$158	\$158	\$270	\$158
Change in Benefits from No Action	\$0	\$15	\$14	-\$97	-\$97	-\$97	\$15	-\$97
Percent Change in Benefits from No Action	0.00%	5.87%	5.52%	-38.12%	-38.12%	-38.12%	5.68%	-38.12%
Effects Scale	None	Moderate	Moderate	Major	Major	Major	Moderate	Major

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

Effects Scales are described in Table 2-3 of this appendix.

Table 3-9. Recreation Results by Reservoir – Blue River Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	31	32	32	32	31	24	24	24
Change in Visits from No Action	0	1	1	1	0	-7	-7	-7
Total Annual Benefits	\$17,325	\$17,797	\$17,815	\$17,755	\$17,239	\$13,325	\$17,821	\$17,604
Average Annual Benefits	\$209	\$214	\$215	\$214	\$208	\$161	\$215	\$212
Change in Benefits from No Action	\$0	\$6	\$6	\$5	-\$1	-\$48	\$6	\$3

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Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Percent Change in Benefits from No Action	0.00%	2.73%	2.83%	2.49%	-0.48%	-23.10%	2.87%	1.63%
Effects Scale	None	Minor	Minor	Minor	None	Major	Minor	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-10. Recreation Results by Reservoir – Lookout Point Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	72	70	71	71	44	67	71	71
Change in Visits from No Action	0	-1	0	-1	-28	-5	0	1
Total Annual Benefits	\$50,434	\$49,597	\$50,475	\$50,093	\$29,860	\$46,923	\$50,538	\$50,587
Average Annual Benefits	\$608	\$598	\$608	\$604	\$360	\$565	\$609	\$610
Change in Benefits from No Action	\$0	-\$10	\$1	-\$4	-\$248	-\$42	\$1	\$2
Percent Change in Benefits from No Action	0.00%	-1.65%	0.08%	-0.67%	40.78%	-6.96%	0.21%	0.31%
Effects Scale	None	Minor	None	None	Major	Moderate	None	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-11. Recreation Results by Reservoir – Hills Creek Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	82	87	87	86	82	68	87	84
Change in Visits from No Action	0	5	5	4	0	-14	5	2
Total Annual Benefits	\$49,742	\$52,726	\$52,938	\$52,238	\$49,805	\$41,285	\$52,944	\$50,653
Average Annual Benefits	\$599	\$635	\$638	\$629	\$600	\$497	\$638	\$610
Change in Benefits from No Action	\$0	\$36	\$39	\$30	\$1	-\$102	\$39	\$11

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Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Percent Change in Benefits from No Action	0.00%	5.99%	6.42%	5.02%	0.13%	-17.00%	6.44%	1.84%
Effects Scale	None	Moderate	Moderate	Moderate	None	Moderate	Moderate	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-12. Recreation Results by Reservoir – Dexter Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	327	327	327	327	327	327	327	327
Change in Visits from No Action	0	0	0	0	0	0	0	0
Total Annual Benefits	\$189,147	\$189,147	\$189,147	\$189,147	\$189,147	\$189,147	\$189,147	\$189,147
Average Annual Benefits	\$2,279	\$2,279	\$2,279	\$2,279	\$2,279	\$2,279	\$2,279	\$2,279
Change in Benefits from No Action	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Percent Change in Benefits from No Action	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Effects Scale	None	None	None	None	None	None	None	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

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Table 3-13. Recreation Results by Reservoir – Fall Creek Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	110	111	112	112	111	111	112	111
Change in Visits from No Action	0	1	2	1	1	1	2	1
Total Annual Benefits	\$69,355	\$70,139	\$70,342	\$70,269	\$69,994	\$70,097	\$70,422	\$70,047
Average Annual Benefits	\$836	\$845	\$848	\$847	\$843	\$845	\$849	\$844
Change in Benefits from No Action	\$0	\$10	\$12	\$11	\$8	\$9	\$13	\$8
Percent Change in Benefits from No Action	0.00%	1.14%	1.42%	1.32%	0.92%	1.07%	1.54%	0.99%
Effects Scale	None	Minor	Minor	Minor	None	Minor	Minor	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-14. Recreation Results by Reservoir – Dorena Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	199	208	205	205	203	205	205	203
Change in Visits from No Action	0	9	6	6	4	6	6	4
Total Annual Benefits	\$168,880	\$176,207	\$174,016	\$173,729	\$172,363	\$173,685	\$173,804	\$171,772
Average Annual Benefits	\$2,035	\$2,123	\$2,097	\$2,093	\$2,077	\$2,093	\$2,094	\$2,070
Change in Benefits from No Action	\$0	\$88	\$62	\$58	\$42	\$58	\$59	\$35
Percent Change in Benefits from No Action	0.00%	4.34%	3.04%	2.87%	2.06%	2.85%	2.91%	1.71%
Effects Scale	None	Minor	Minor	Minor	Minor	Minor	Minor	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-15. Recreation Results by Reservoir – Cottage Grove Reservoir.

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Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	238	243	243	243	239	241	243	241
Change in Visits from No Action	0	5	5	5	2	4	5	3
Total Annual Benefits	\$191,559	\$195,908	\$195,836	\$195,530	\$192,778	\$194,388	\$195,566	\$193,740
Average Annual Benefits	\$2,308	\$2,360	\$2,360	\$2,356	\$2,323	\$2,342	\$2,356	\$2,334
Change in Benefits from No Action	\$0	\$52	\$52	\$48	\$15	\$34	\$48	\$26
Percent Change in Benefits from No Action	0.00%	2.27%	2.24%	2.08%	0.64%	1.48%	2.09%	1.14%
Effects Scale	None	Minor	Minor	Minor	None	Minor	Minor	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-16. Recreation Results by Reservoir – Fern Ridge Reservoir.

Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	598	598	598	598	598	598	598	598
Change in Visits from No Action	0	0	0	0	0	0	0	0
Total Annual Benefits	\$416,076	\$416,005	\$416,005	\$416,005	\$416,005	\$416,005	\$416,005	\$416,005
Average Annual Benefits	\$5,022	\$5,021	\$5,021	\$5,021	\$5,021	\$5,021	\$5,021	\$5,021
Change in Benefits from No Action	\$0	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1
Percent Change in Benefits from No Action	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
Effects Scale	None	None	None	None	None	None	None	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-17. Recreation Results – All Reservoirs.

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Metric	No Action	Alt 1	Alt 2A	Alt 2B	Alt 3A	Alt 3B	Alt 4	Alt 5
Average Annual Visits	2,369	2,399	2,387	2,370	2,288	2,246	2,379	2,355
Change in Visits from No Action	0	30	18	1	-80	-123	10	-14
Total Annual Benefits	\$1,676,062	\$1,697,812	\$1,690,070	\$1,679,007	\$1,625,011	\$1,593,123	\$1,689,845	\$1,673,819
Average Annual Benefits	\$20,202	\$20,464	\$20,371	\$20,238	\$19,587	\$19,203	\$20,369	\$20,175
Change in Benefits from No Action	\$0	\$262	\$169	\$36	-\$615	-\$999	\$166	-\$27
Percent Change in Benefits from No Action	0.00%	1.30%	0.84%	0.18%	-3.04%	-4.95%	0.82%	-0.13%
Effects Scale	None	Minor	None	None	Minor	Minor	None	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-18. Recreation Results by Alternative – No Action Alternative.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	145	0	\$86,423	\$1,041	0	0.00%	None
Foster	451	0	\$364,762	\$4,395	0	0.00%	None
Green Peter	83	0	\$51,151	\$616	0	0.00%	None
Cougar	34	0	\$21,208	\$256	0	0.00%	None
Blue River	31	0	\$17,325	\$209	0	0.00%	None
Lookout Point	72	0	\$50,434	\$608	0	0.00%	None
Hills Creek	82	0	\$49,742	\$599	0	0.00%	None
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None
Fall Creek	110	0	\$69,355	\$836	0	0.00%	None
Dorena	199	0	\$168,880	\$2,035	0	0.00%	None

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Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Cottage Grove	238	0	\$191,559	\$2,308	0	0.00%	None
Fern Ridge	598	0	\$416,076	\$5,022	0	0.00%	None
Total	2,369	0	1,676,062	20,202	0	0.00%	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-19. Recreation Results by Alternative – Alternative 1.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	150	6	\$89,861	\$1,083	42	3.99%	Minor
Foster	452	1	\$365,921	\$4,409	14	0.32%	None
Green Peter	84	1	\$52,054	\$627	11	1.77%	Minor
Cougar	36	2	\$22,450	\$271	15	5.87%	Moderate
Blue River	32	1	\$17,797	\$214	6	2.73%	Minor
Lookout Point	70	-1	\$49,597	\$598	-10	-1.65%	Minor
Hills Creek	87	5	\$52,726	\$635	36	5.99%	Moderate
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None
Fall Creek	111	1	\$70,139	\$845	10	1.14%	Minor
Dorena	208	9	\$176,207	\$2,123	88	4.34%	Minor
Cottage Grove	243	5	\$195,908	\$2,360	52	2.27%	Minor
Fern Ridge	598	0	\$416,005	\$5,021	-1	-0.01%	None

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Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Total	2,399	30	1,697,812	20,465	263	1.30%	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-20. Recreation Results by Alternative – Alternative 2A.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	144	-1	\$85,870	\$1,035	-7	-0.63%	None
Foster	452	1	\$365,921	\$4,409	14	0.32%	None
Green Peter	80	-3	\$49,326	\$594	-22	-3.57%	Minor
Cougar	36	2	\$22,379	\$270	14	5.52%	Moderate
Blue River	32	1	\$17,815	\$215	6	2.83%	Minor
Lookout Point	71	0	\$50,475	\$608	1	0.08%	None
Hills Creek	87	5	\$52,938	\$638	39	6.42%	Moderate
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None
Fall Creek	112	2	\$70,342	\$848	12	1.42%	Minor
Dorena	205	6	\$174,016	\$2,097	62	3.04%	Minor
Cottage Grove	243	5	\$195,836	\$2,360	52	2.24%	Minor
Fern Ridge	598	0	\$416,005	\$5,021	-1	-0.01%	None
Total	2,387	18	1,690,070	20,371	169	0.84%	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

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Table 3-21. Recreation Results by Alternative – Alternative 2B.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	144	-1	\$85,869	\$1,035	-7	-0.63%	None
Foster	452	1	\$365,921	\$4,409	14	0.32%	None
Green Peter	80	-3	\$49,326	\$594	-22	-3.57%	Minor
Cougar	21	-13	\$13,125	\$158	-97	-38.12%	Major
Blue River	32	1	\$17,755	\$214	5	2.49%	Minor
Lookout Point	71	-1	\$50,093	\$604	-4	-0.67%	None
Hills Creek	86	4	\$52,238	\$629	30	5.02%	Moderate
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None
Fall Creek	112	1	\$70,269	\$847	11	1.32%	Minor
Dorena	205	6	\$173,729	\$2,093	58	2.87%	Minor
Cottage Grove	243	5	\$195,530	\$2,356	48	2.08%	Minor
Fern Ridge	598	0	\$416,005	\$5,021	-1	-0.01%	None
Total	2,369	1	1,679,007	20,238	36	0.18%	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-22. Recreation Results by Alternative – Alternative 3A.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	100	-45	\$59,445	\$716	-325	-31.21%	Major
Foster	452	1	\$365,921	\$4,409	14	0.32%	None

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Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Green Peter	80	-3	\$49,328	\$594	-22	-3.57%	Minor
Cougar	21	-13	\$13,125	\$158	-97	-38.12%	Major
Blue River	31	0	\$17,239	\$208	-1	-0.48%	None
Lookout Point	44	-28	\$29,860	\$360	-248	-40.78%	Major
Hills Creek	82	0	\$49,805	\$600	1	0.13%	None
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None
Fall Creek	111	1	\$69,994	\$843	8	0.92%	None
Dorena	203	4	\$172,363	\$2,077	42	2.06%	Minor
Cottage Grove	239	2	\$192,778	\$2,323	15	0.64%	None
Fern Ridge	598	0	\$416,005	\$5,021	-1	-0.01%	None
Total	2,288	-80	1,625,010	19,587	-615	-3.04%	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-23. Recreation Results by Alternative – Alternative 3B.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	139	-6	\$83,096	\$1,001	-40	-3.84%	Minor
Foster	406	-45	\$328,615	\$3,959	-436	-9.91%	Moderate
Green Peter	39	-44	\$23,432	\$282	-334	-54.19%	Major
Cougar	21	-13	\$13,125	\$158	-97	-38.12%	Major

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Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Blue River	24	-7	\$13,325	\$161	-48	-23.10%	Major
Lookout Point	67	-5	\$46,923	\$565	-42	-6.96%	Moderate
Hills Creek	68	-14	\$41,285	\$497	-102	-17.00%	Moderate
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None
Fall Creek	111	1	\$70,097	\$845	9	1.07%	Minor
Dorena	205	6	\$173,685	\$2,093	58	2.85%	Minor
Cottage Grove	241	4	\$194,388	\$2,342	34	1.48%	Minor
Fern Ridge	598	0	\$416,005	\$5,021	-1	-0.01%	None
Total	2,246	-123	1,593,123	19,203	-999	-4.95%	Minor

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

Effects Scales are described in Table 2-3 of this appendix.

Table 3-24. Recreation Results by Alternative – Alternative 4.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	144	-1	\$85,866	\$1,035	-7	-0.64%	None
Foster	452	1	\$365,921	\$4,409	14	0.32%	None
Green Peter	80	-3	\$49,396	\$595	-21	-3.44%	Minor
Cougar	36	2	\$22,414	\$270	15	5.68%	Moderate
Blue River	24	-7	\$17,821	\$215	6	2.87%	Minor
Lookout Point	71	0	\$50,538	\$609	1	0.21%	None

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Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Hills Creek	87	5	\$52,944	\$638	39	6.44%	Moderate
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None
Fall Creek	112	2	\$70,422	\$849	13	1.54%	Minor
Dorena	205	6	\$173,804	\$2,094	59	2.91%	Minor
Cottage Grove	243	5	\$195,566	\$2,356	48	2.09%	Minor
Fern Ridge	598	0	\$416,005	\$5,021	-1	-0.01%	None
Total	2,379	10	1,689,844	20,368	166	0.82%	None

Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

Table 3-25. Recreation Results by Alternative – Alternative 5.

Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Detroit	144	-1	\$85,869	\$1,035	-7	-0.63%	None
Foster	452	1	\$365,921	\$4,409	14	0.32%	None
Green Peter	80	-3	\$49,349	\$595	-22	-3.52%	Minor
Cougar	21	-13	\$13,125	\$158	-97	-38.12%	Major
Blue River	24	-7	\$17,604	\$212	3	1.63%	Minor
Lookout Point	71	1	\$50,587	\$610	2	0.31%	None
Hills Creek	84	2	\$50,653	\$610	11	1.84%	Minor
Dexter	327	0	\$189,147	\$2,279	0	0.00%	None

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Reservoir	Average Annual Visits	Change in Visits from No Action	Total Annual Benefits	Average Annual Benefits	Change in Benefits from No Action	Percent Change in Benefits from No Action	Effects Scale
Fall Creek	111	1	\$70,047	\$844	8	0.99%	None
Dorena	203	4	\$171,772	\$2,070	35	1.71%	Minor
Cottage Grove	241	3	\$193,740	\$2,334	26	1.14%	Minor
Fern Ridge	598	0	\$416,005	\$5,021	-1	-0.01%	None
Total	2,355	-13	1,673,819	20,175	-27	-0.13%	None

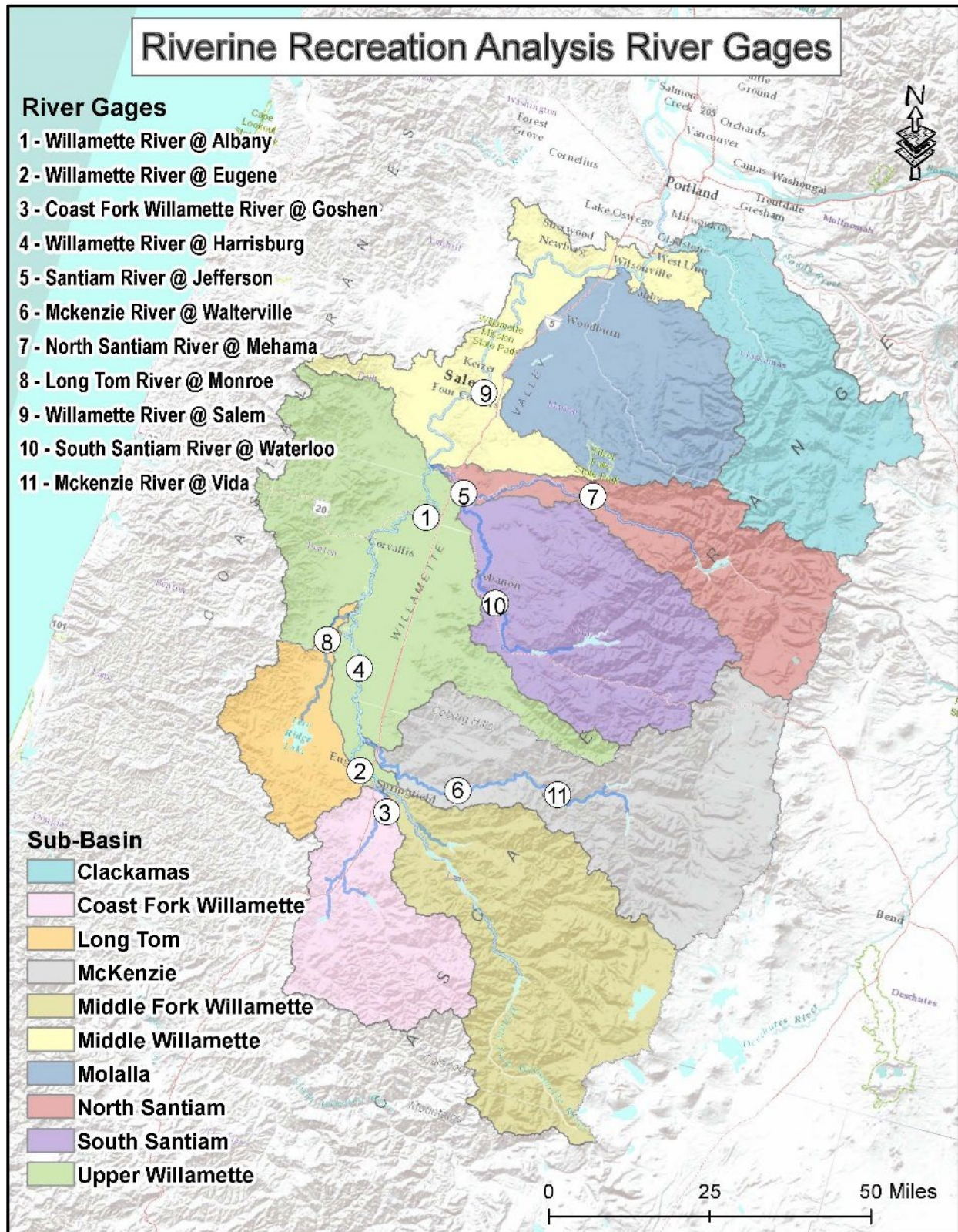
Note that the figures are in 1,000s, and the dollar values are at 2022 price level.

. Effects Scales are described in Table 2-3 of this appendix.

CHAPTER 4 - RECREATION EFFECTS – RIVERINE RECREATION

Because riverine recreation in the Willamette Valley System is widespread and abundant, with no visitor tracking data available, a qualitative analysis was done to estimate general effects on recreation to riverine areas across the alternatives. Using HEC-ResSim model simulated flow data for various river gage locations across the 83-year period of record, daily flows at each gage location were compared for the action and no action alternatives. The same reservoir effects scale shown in Table 2-3 of this appendix was used for riverine area effect estimations. Figure 4-1 shows the location of river gages that were used.

Figure 4-1. River Gages Used for Riverine Recreation Analysis.



4.1 CHANGES IN FLOW AT RIVER GAGE LOCATIONS

Table 4-1 through Table 4-6 show river gage/season/alternative statistics. Combinations showing estimated average flows that are plus or minus 5 percent of the No-action Alternative flows are highlighted in green (+) and red (-), respectively.

Table 4-1. Riverine Flow Uncertainty Statistics - Alternative 1.

Alternative 1 Average Daily Flows Summary	–	–	–	–
Control Point (gage) and Season	25% Non- exceedance (Dry Year)	Average	Median	75% Non- exceedance (Wet Year)
Albany	–	–	–	–
Annual	-2.71%	-0.03%	0.20%	0.75%
Winter (12/21- 03/20)	0.33%	0.28%	0.74%	0.08%
Spring (03/21- 06/20)	-14.86%	-4.31%	-2.40%	0.78%
Summer (06/21- 09/20)	6.41%	7.70%	5.32%	6.15%
Fall (09/21- 12/20)	1.19%	0.52%	-0.42%	0.11%
Eugene	–	–	–	–
Annual	-4.78%	-0.04%	-0.53%	1.56%
Winter (12/21- 03/20)	-0.77%	0.75%	1.55%	1.80%
Spring (03/21- 06/20)	-27.24%	-8.33%	-9.60%	0.40%
Summer (06/21- 09/20)	11.17%	13.19%	10.27%	11.61%
Fall (09/21- 12/20)	1.99%	0.15%	-1.11%	-1.48%
Goshen	–	–	–	–
Annual	-3.64%	-0.02%	-0.49%	0.68%
Winter (12/21- 03/20)	-0.02%	-0.05%	-0.05%	-0.04%
Spring (03/21- 06/20)	-21.78%	-3.54%	-4.54%	2.47%
Summer (06/21- 09/20)	10.55%	5.80%	6.49%	4.14%

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Alternative 1 Average Daily Flows Summary	–	–	–	–
Fall (09/21- 12/20)	6.25%	1.93%	0.35%	0.17%
Harrisburg	–	–	–	–
Annual	-3.24%	-0.03%	0.21%	0.95%
Winter (12/21- 03/20)	-0.09%	0.36%	1.01%	0.42%
Spring (03/21- 06/20)	-17.06%	-5.10%	-3.53%	0.95%
Summer (06/21- 09/20)	7.87%	8.24%	5.98%	6.67%
Fall (09/21- 12/20)	1.07%	0.62%	-0.25%	-0.41%
Jasper	–	–	–	–
Annual	-4.93%	-0.03%	-1.54%	1.40%
Winter (12/21- 03/20)	-0.96%	1.18%	1.35%	2.80%
Spring (03/21- 06/20)	-28.09%	-10.00%	-16.17%	-1.26%
Summer (06/21- 09/20)	11.34%	14.01%	10.78%	12.93%
Fall (09/21- 12/20)	0.85%	-0.42%	-0.06%	-3.17%
Jefferson	–	–	–	–
Annual	-3.94%	-0.06%	-0.26%	1.23%
Winter (12/21- 03/20)	-0.87%	-0.22%	0.00%	0.49%
Spring (03/21- 06/20)	-10.19%	-1.93	-0.17%	1.83%
Summer (06/21- 09/20)	-21.35%	-13.60%	-16.71%	-9.95%
Fall (09/21- 12/20)	5.90%	5.12%	4.02%	4.06%
Mehama	–	–	–	–
Annual	-2.95%	-0.06%	-0.71%	1.09%
Winter (12/21- 03/20)	-1.08%	-0.39%	-0.74%	0.10%

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Alternative 1 Average Daily Flows Summary	–	–	–	–
Spring (03/21-06/20)	-9.36%	-1.99%	-2.14%	1.77%
Summer (06/21-09/20)	-11.59%	-4.78%	-6.61%	-1.01%
Fall (09/21-12/20)	6.28%	3.63%	2.77%	2.29%
Monroe	–	–	–	–
Annual	-0.03%	0.00%	0.01%	0.00%
Winter (12/21-03/20)	0.00%	0.00%	0.00%	0.00%
Spring (03/21-06/20)	0.19%	0.06%	0.11%	0.02%
Summer (06/21-09/20)	0.40%	0.21%	0.24%	0.07%
Fall (09/21-12/20)	-0.16%	-0.03%	-0.01%	0.00%
Salem	–	–	–	–
Annual	-2.84%	-0.04%	0.25%	0.72%
Winter (12/21-03/20)	0.06%	0.12%	0.58%	-0.07%
Spring (03/21-06/20)	-13.10%	-3.31%	-1.10%	1.09%
Summer (06/21-09/20)	-0.51%	1.52%	-0.30%	1.18%
Fall (09/21-12/20)	3.19%	2.14%	1.17%	1.54%
Vida	–	–	–	–
Annual	-1.67%	-0.02%	0.19%	0.83%
Winter (12/21-03/20)	-0.01%	-0.02%	-0.05%	0.08%
Spring (03/21-06/20)	-9.64%	-3.12%	-2.04%	1.41%
Summer (06/21-09/20)	3.92%	3.01%	2.19%	0.82%
Fall (09/21-12/20)	2.25%	1.56%	1.64%	1.12%
Waterloo	–	–	–	–

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Alternative 1 Average Daily Flows Summary	–	–	–	–
Annual	-7.55%	-0.07%	0.13%	1.26%
Winter (12/21-03/20)	-2.11%	-0.22%	-0.40%	-0.21%
Spring (03/21-06/20)	-19.33%	-2.53%	4.28%	3.64%
Summer (06/21-09/20)	-29.19%	-21.64%	-25.52%	-21.06%
Fall (09/21-12/20)	7.34%	8.45%	6.74%	6.44%

Table 4-2. Riverine Flow Uncertainty Statistics - Alternative 2A.

Alternative 2A Average Daily Flows Summary	–	–	–	–
Control Point (gage) and Season	25% Non- exceedance (Dry Year)	Average	Median	75% Non- exceedance (Wet Year)
Albany	–	–	–	–
Annual	-2.20%	-0.1%	0.14%	0.73%
Winter (12/21-03/20)	-0.07%	0.13%	0.61%	0.34%
Spring (03/21-06/20)	-11.69%	-3.30%	-1.58%	0.70%
Summer (06/21-09/20)	-2.53%	-0.70%	-3.00%	-2.14%
Fall (09/21-12/20)	5.85%	3.07%	2.39%	2.28%
Eugene	–	–	–	–
Annual	-3.78%	-0.03%	0.08%	1.46%
Winter (12/21-03/20)	-2.07%	0.33%	1.54%	1.72%
Spring (03/21-06/20)	-21.06%	-6.32%	-6.82%	0.67%
Summer (06/21-09/20)	-1.69%	-1.72%	-4.06%	-3.68%

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Alternative 2A Average Daily Flows Summary	—	—	—	—
Fall (09/21- 12/20)	8.88%	5.17%	5.35%	3.51%
Goshen	—	—	—	—
Annual	-3.18%	-0.02%	0.03%	0.50%
Winter (12/21- 03/20)	-0.03%	-0.02%	0.06%	-0.08%
Spring (03/21- 06/20)	-17.04%	-2.24%	-1.23%	2.53%
Summer (06/21- 09/20)	-0.24%	0.11%	-2.82%	0.29%
Fall (09/21- 12/20)	6.64%	1.83%	1.53%	0.14%
Harrisburg	—	—	—	—
Annual	-2.68%	-0.02%	0.24%	0.80%
Winter (12/21- 03/20)	-0.72%	0.17%	0.61%	0.44%
Spring (03/21- 06/20)	-13.46%	-3.84%	-1.88%	1.02%
Summer (06/21- 09/20)	-1.55%	-0.89%	-3.02%	-2.22%
Fall (09/21- 12/20)	6.38%	3.67%	3.30%	2.18%
Jasper	—	—	—	—
Annual	-3.26%	-0.03%	-0.34%	0.91%
Winter (12/21- 03/20)	-3.59%	0.51%	1.27%	1.77%
Spring (03/21- 06/20)	-20.83%	-7.71%	-12.61%	-0.98%
Summer (06/21- 09/20)	-0.72%	-1.98%	-4.30%	-5.39%
Fall (09/21- 12/20)	10.54%	6.22%	9.22%	4.08%
Jefferson	—	—	—	—
Annual	0.04%	0.03%	-0.36%	-1.28%
Winter (12/21- 03/20)	-9.90%	-6.20%	-9.65%	-8.13%

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Alternative 2A Average Daily Flows Summary	–	–	–	–
Spring (03/21-06/20)	-2.64%	-0.75%	0.26%	0.90%
Summer (06/21-09/20)	22.83%	22.00%	25.87%	24.19%
Fall (09/21-12/20)	4.81%	3.42%	3.13%	0.88%
Mehama	–	–	–	–
Annual	-1.54%	0.01%	-0.45%	0.70%
Winter (12/21-03/20)	-1.42%	-0.50%	-1.00%	0.04%
Spring (03/21-06/20)	-4.95%	-1.12%	-1.92%	0.98%
Summer (06/21-09/20)	8.56%	5.63%	8.90%	4.17%
Fall (09/21-12/20)	-3.85%	-0.45%	-2.24%	0.18%
Monroe	–	–	–	–
Annual	-0.03%	0.00%	0.01%	0.00%
Winter (12/21-03/20)	0.00%	0.00%	0.00%	0.00%
Spring (03/21-06/20)	0.19%	0.06%	0.11%	0.02%
Summer (06/21-09/20)	0.42%	0.22%	0.25%	0.08%
Fall (09/21-12/20)	-0.16%	-0.03%	-0.01%	0.00%
Salem	–	–	–	–
Annual	-1.63%	-0.01%	-0.13%	-0.04%
Winter (12/21-03/20)	-2.58%	-1.86%	-2.66%	-2.77%
Spring (03/21-06/20)	-9.31%	-2.34%	-0.75%	0.59%
Summer (06/21-09/20)	4.08%	5.74%	5.51%	5.84%
Fall (09/21-12/20)	5.33%	3.15%	2.17%	2.17%
Vida	–	–	–	–

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Alternative 2A Average Daily Flows Summary	—	—	—	—
Annual	-1.19%	-0.01%	0.01%	0.43%
Winter (12/21-03/20)	-0.05%	0.00%	0.14%	-0.01%
Spring (03/21-06/20)	-7.43%	-2.20%	-1.32%	1.13%
Summer (06/21-09/20)	0.09%	-0.13%	-1.19%	-1.70%
Fall (09/21-12/20)	4.71%	2.48%	2.25%	1.41%
Waterloo	—	—	—	—
Annual	4.65%	0.06%	-0.58%	-3.67%
Winter (12/21-03/20)	-25.41%	-15.98%	-28.20%	-21.42%
Spring (03/21-06/20)	2.01%	-0.45%	4.99%	1.32%
Summer (06/21-09/20)	34.49%	37.75%	42.79%	49.55%
Fall (09/21-12/20)	18.89%	8.59%	9.44%	1.94%

Table 4-3. Riverine Flow Uncertainty Statistics - Alternative 2B.

Alternative 2B Average Daily Flows Summary	—	—	—	—
Control Point (gage) and Season	25% Non-exceedance (Dry Year)	Average	Median	75% Non-exceedance (Wet Year)
Albany	—	—	—	—
Annual	-1.71%	0.00%	0.37%	0.73%
Winter (12/21-03/20)	1.38%	1.27%	1.98%	0.34%
Spring (03/21-06/20)	-6.72%	0.28%	3.33%	0.70%
Summer (06/21-09/20)	-3.57%	-3.01%	-4.41%	-2.14%

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Alternative 2B Average Daily Flows Summary	—	—	—	—
Fall (09/21-12/20)	0.62%	-1.15%	-2.70%	2.28%
Eugene	—	—	—	—
Annual	-3.20%	-0.01%	0.13%	1.46%
Winter (12/21-03/20)	-1.32%	0.41%	0.70%	1.72%
Spring (03/21-06/20)	-20.50%	-6.14%	6.22%	0.67%
Summer (06/21-09/20)	4.10%	4.31%	4.78%	-3.68%
Fall (09/21-12/20)	6.24%	2.53%	2.04%	3.51%
Goshen	—	—	—	—
Annual	-3.19%	-0.01%	-0.03%	0.50%
Winter (12/21-03/20)	-0.05%	-0.07%	-0.08%	-0.08%
Spring (03/21-06/20)	-17.14%	-2.27%	-1.31%	2.53%
Summer (06/21-09/20)	2.78%	1.88%	0.39%	0.29%
Fall (09/21-12/20)	5.63%	1.67%	0.95%	0.14%
Harrisburg	—	—	—	—
Annual	-2.41%	0.0%	0.54%	0.80%
Winter (12/21-03/20)	1.34%	1.83%	2.51%	0.44%
Spring (03/21-06/20)	-8.38%	0.29%	3.71%	1.02%
Summer (06/21-09/20)	-2.80%	-3.29%	-4.44%	-2.22%
Fall (09/21-12/20)	-0.17%	-1.43%	-2.52%	2.18%
Jasper	—	—	—	—
Annual	-3.10%	-0.02%	-0.05%	0.91%
Winter (12/21-03/20)	-2.64%	0.67%	1.09%	1.77%

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Alternative 2B Average Daily Flows Summary	–	–	–	–
Spring (03/21- 06/20)	-20.00%	-7.46%	-12.20%	-0.98%
Summer (06/21- 09/20)	5.31%	4.51%	5.35%	-5.39%
Fall (09/21- 12/20)	5.59%	2.78%	4.92%	4.08%
Jefferson	–	–	–	–
Annual	0.02%	0.03%	-0.38%	-1.28%
Winter (12/21- 03/20)	-9.92%	-6.18%	-9.68%	-8.13%
Spring (03/21- 06/20)	-2.70%	-0.79%	0.26%	0.90%
Summer (06/21- 09/20)	22.83%	22.00%	25.86%	24.19%
Fall (09/21- 12/20)	4.83%	3.44%	3.11%	0.88%
Mehama	–	–	–	–
Annual	-1.59%	0.02%	-0.43%	0.70%
Winter (12/21- 03/20)	-1.42%	-0.46%	-.93%	0.04%
Spring (03/21- 06/20)	-5.14%	-1.22%	-1.99%	0.98%
Summer (06/21- 09/20)	8.56%	5.63%	8.90%	4.17%
Fall (09/21- 12/20)	-3.83%	-0.41%	-2.21%	0.18%
Monroe	–	–	–	–
Annual	-0.03%	0.00%	0.01%	0.00%
Winter (12/21- 03/20)	0.00%	0.00%	0.00%	0.00%
Spring (03/21- 06/20)	0.19%	0.06%	0.11%	0.02%
Summer (06/21- 09/20)	0.42%	0.22%	0.25%	0.08%
Fall (09/21- 12/20)	-0.16%	-0.03%	-0.01%	0.00%
Salem	–	–	–	–

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Alternative 2B Average Daily Flows Summary	—	—	—	—
Annual	-1.35%	-0.01%	-0.05%	-0.04%
Winter (12/21-03/20)	-1.60%	-1.21%	-2.22%	-2.77%
Spring (03/21-06/20)	-6.20%	-0.12%	-2.52%	0.59%
Summer (06/21-09/20)	3.07%	4.12%	4.54%	5.84%
Fall (09/21-12/20)	2.10%	0.66%	-0.79%	2.17%
Vida	—	—	—	—
Annual	-1.69%	-0.01%	0.06%	0.43%
Winter (12/21-03/20)	6.11%	0.00%	4.44%	-0.01%
Spring (03/21-06/20)	-4.37%	-2.20%	11.68%	1.13%
Summer (06/21-09/20)	-12.02%	-0.13%	-11.72%	-1.70%
Fall (09/21-12/20)	-9.96%	2.48%	-10.61%	1.41%
Waterloo	—	—	—	—
Annual	4.65%	0.06%	-0.58%	-3.67%
Winter (12/21-03/20)	-25.41%	-15.99%	-28.21%	-21.42%
Spring (03/21-06/20)	2.01%	-0.45%	4.99%	1.32%
Summer (06/21-09/20)	34.49%	37.75%	42.79%	49.55%
Fall (09/21-12/20)	18.89%	8.59%	9.44%	1.94%

Table 4-4. Riverine Flow Uncertainty Statistics - Alternative 3A.

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Alternative 3A Average Daily Flows Summary	–	–	–	–
Control Point (gage) and Season	25% Non- exceedance (Dry Year)	Average	Median	75% Non- exceedance (Wet Year)
Albany	–	–	–	–
Annual	-4.17%	0.00%	1.53%	1.95%
Winter (12/21- 03/20)	4.27%	3.75%	5.88%	3.62%
Spring (03/21- 06/20)	1.05%	7.25%	13.29%	13.48%
Summer (06/21- 09/20)	-15.24%	-12.88%	-13.24%	-11.81%
Fall (09/21- 12/20)	-15.98%	-7.87%	-9.52%	-5.92%
Eugene	–	–	–	–
Annual	-4.76%	0.00%	2.85%	3.97%
Winter (12/21- 03/20)	8.07%	7.06%	13.55%	8.88%
Spring (03/21- 06/20)	3.17%	13.84%	21.41%	26.44%
Summer (06/21- 09/20)	-13.72%	-21.19%	-20.68%	-26.33%
Fall (09/21- 12/20)	-20.47%	-11.06%	-12.12%	-6.56%
Goshen	–	–	–	–
Annual	-2.25%	0.00%	0.21%	0.30%
Winter (12/21- 03/20)	0.15%	0.03%	0.14%	-0.13%
Spring (03/21- 06/20)	-17.70%	-2.34%	-1.56%	2.78%
Summer (06/21- 09/20)	27.33%	13.03%	20.32%	5.07%
Fall (09/21- 12/20)	0.89%	-0.44%	-2.50%	-1.41%
Harrisburg	–	–	–	–
Annual	-4.61%	0.00%	1.71%	2.57%
Winter (12/21- 03/20)	6.14%	5.42%	8.49%	6.26%

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Alternative 3A Average Daily Flows Summary	–	–	–	–
Spring (03/21-06/20)	0.44%	8.36%	14.90%	15.94%
Summer (06/21-09/20)	-13.87%	-13.77%	-13.88%	-14.20%
Fall (09/21-12/20)	-18.14%	-9.53%	-11.65%	-7.45%
Jasper	–	–	–	–
Annual	-4.19%	0.00%	1.85%	5.04%
Winter (12/21-03/20)	11.00%	11.06%	17.80%	16.58%
Spring (03/21-06/20)	9.84%	19.33%	24.11%	34.24%
Summer (06/21-09/20)	-16.06%	-25.07%	-24.36%	-30.55%
Fall (09/21-12/20)	-22.21%	-14.43%	-15.43%	-10.42%
Jefferson	–	–	–	–
Annual	-1.60%	0.05%	-1.28%	0.13%
Winter (12/21-03/20)	0.08%	-0.60%	-4.36%	-3.27%
Spring (03/21-06/20)	11.18%	10.44%	15.41%	14.20%
Summer (06/21-09/20)	-7.31%	-0.31%	3.01%	9.65%
Fall (09/21-12/20)	-13.75%	-7.64%	-12.38%	-7.87%
Mehama	–	–	–	–
Annual	-5.35%	0.08%	-1.71%	4.41%
Winter (12/21-03/20)	21.85%	14.56%	13.28%	13.95%
Spring (03/21-06/20)	22.57%	22.39%	29.11%	29.74%
Summer (06/21-09/20)	-38.78%	-28.63%	-28.84%	-14.81%
Fall (09/21-12/20)	-40.38%	-24.68%	-31.89%	-20.23%
Monroe	–	–	–	–

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Alternative 3A Average Daily Flows Summary	—	—	—	—
Annual	-0.03%	0.00%	0.01%	0.00%
Winter (12/21-03/20)	0.00%	0.00%	0.00%	0.00%
Spring (03/21-06/20)	0.19%	0.06%	0.11%	0.02%
Summer (06/21-09/20)	0.42%	0.22%	0.25%	0.08%
Fall (09/21-12/20)	-0.16%	-0.03%	-0.01%	0.00%
Salem	—	—	—	—
Annual	-3.24%	-0.01%	-0.85%	1.11%
Winter (12/21-03/20)	2.79%	1.83%	1.83%	0.95%
Spring (03/21-06/20)	3.71%	8.12%	14.45%	12.73%
Summer (06/21-09/20)	-13.55%	-8.98%	-8.22%	-5.07%
Fall (09/21-12/20)	-14.44%	-7.35%	-9.39%	-6.38%
Vida	—	—	—	—
Annual	-3.38%	0.00%	-0.71%	0.95%
Winter (12/21-03/20)	6.67%	7.14%	7.04%	8.49%
Spring (03/21-06/20)	-0.14%	4.60%	7.74%	8.95%
Summer (06/21-09/20)	-8.29%	-5.88%	-6.12%	-4.80%
Fall (09/21-12/20)	-15.14%	-10.30%	-15.61%	-12.93%
Waterloo	—	—	—	—
Annual	4.68%	0.06%	-0.58%	-3.56%
Winter (12/21-03/20)	-25.25%	-15.99%	-28.24%	-21.25%
Spring (03/21-06/20)	1.99%	-0.45%	5.02%	1.32%
Summer (06/21-09/20)	34.48%	37.75%	42.79%	49.56%

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Alternative 3A Average Daily Flows Summary	–	–	–	–
Fall (09/21- 12/20)	18.84%	8.59%	9.44%	2.07%

Table 4-5. Riverine Flow Uncertainty Statistics - Alternative 3B.

Alternative 3B Average Daily Flows Summary	–	–	–	–
Control Point (gage) and Season	25% Non- exceedance (Dry Year)	Average	Median	75% Non- exceedance (Wet Year)
Albany	–	–	–	–
Annual	-4.77%	0.02%	0.63%	2.18%
Winter (12/21- 03/20)	-1.55%	1.86%	2.56%	2.57%
Spring (03/21- 06/20)	-1.64%	5.37%	9.87%	10.57%
Summer (06/21- 09/20)	-6.07%	-4.80%	-7.04%	-2.52%
Fall (09/21- 12/20)	-12.40%	-6.07%	-7.51%	-3.91%
Eugene	–	–	–	–
Annual	-8.91%	0.04%	-0.44%	4.75%
Winter (12/21- 03/20)	-13.82%	-0.33	-2.48%	4.51%
Spring (03/21- 06/20)	-12.06%	3.30%	4.84%	11.92%
Summer (06/21- 09/20)	7.88%	6.75%	7.18%	9.01%
Fall (09/21- 12/20)	-10.63%	-4.78%	-5.44%	-1.35%
Goshen	–	–	–	–
Annual	-2.59%	-0.01%	-0.33%	0.48%
Winter (12/21- 03/20)	-1.52%	-0.36%	-0.94%	0.06%

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Alternative 3B Average Daily Flows Summary	–	–	–	–
Spring (03/21-06/20)	-18.29%	-2.41%	-1.39%	2.68%
Summer (06/21-09/20)	7.98%	5.22%	8.35%	3.43%
Fall (09/21-12/20)	10.35%	1.70%	-0.23%	-0.77%
Harrisburg	–	–	–	–
Annual	-5.63%	0.02%	0.35%	2.95%
Winter (12/21-03/20)	-2.11%	2.78%	2.72%	5.01%
Spring (03/21-06/20)	-2.26%	6.24%	11.09%	12.46%
Summer (06/21-09/20)	-5.49%	-5.14%	-6.28%	-3.12%
Fall (09/21-12/20)	-14.16%	-7.45%	-9.32%	-5.53%
Jasper	–	–	–	–
Annual	-8.76%	0.06%	-2.06%	5.72%
Winter (12/21-03/20)	-18.29%	-0.21%	-7.72%	7.76%
Spring (03/21-06/20)	-9.57%	5.29%	3.59%	15.59%
Summer (06/21-09/20)	8.80%	6.84%	8.05%	9.12%
Fall (09/21-12/20)	-10.98%	-6.93%	-6.28%	-4.37%
Jefferson	–	–	–	–
Annual	0.90%	0.01%	0.02%	0.23%
Winter (12/21-03/20)	6.66%	1.26%	-0.73%	-1.11%
Spring (03/21-06/20)	11.30%	6.49%	13.45%	8.47%
Summer (06/21-09/20)	-9.00%	0.43%	4.36%	10.38%
Fall (09/21-12/20)	-11.97%	-7.17%	-11.30%	-6.25%
Mehama	–	–	–	–

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Alternative 3B Average Daily Flows Summary	–	–	–	–
Annual	2.32%	0.00%	-3.12%	-1.15%
Winter (12/21- 03/20)	-9.87%	-9.02%	-16.98%	-12.64%
Spring (03/21- 06/20)	-6.13%	-2.43%	-3.29%	-1.39%
Summer (06/21- 09/20)	23.10%	23.25%	26.21%	29.23%
Fall (09/21- 12/20)	10.88%	3.77%	-0.28%	3.06%
Monroe	–	–	–	–
Annual	-0.03%	0.00%	0.01%	0.00%
Winter (12/21- 03/20)	0.00%	0.00%	0.00%	0.00%
Spring (03/21- 06/20)	0.19%	0.06%	0.11%	0.02%
Summer (06/21- 09/20)	0.42%	0.22%	0.25%	0.08%
Fall (09/21- 12/20)	-0.16%	-0.03%	-0.01%	0.00%
Salem	–	–	–	–
Annual	-2.81%	0.00%	0.39%	1.16%
Winter (12/21- 03/20)	1.04%	1.31%	0.90%	1.05%
Spring (03/21- 06/20)	2.13%	5.61%	11.06%	8.97%
Summer (06/21- 09/20)	-7.34%	-3.13%	-3.20%	1.41%
Fall (09/21- 12/20)	-11.64%	-6.12%	-8.54%	-5.03%
Vida	–	–	–	–
Annual	-2.46%	0.04%	0.25%	2.27%
Winter (12/21- 03/20)	11.53%	10.22%	10.69%	12.26%
Spring (03/21- 06/20)	9.24%	11.34%	16.84%	17.03%
Summer (06/21- 09/20)	-19.83%	-17.46%	-17.78%	-16.64%

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Alternative 3B Average Daily Flows Summary	—	—	—	—
Fall (09/21-12/20)	-19.34%	-14.27%	-18.28%	-14.09%
Waterloo	—	—	—	—
Annual	-0.29%	0.05%	6.41%	2.95%
Winter (12/21-03/20)	33.43%	13.09%	20.20%	12.41%
Spring (03/21-06/20)	38.92%	19.65%	46.97%	23.52%
Summer (06/21-09/20)	-45.37%	-30.20%	-23.74%	-10.97%
Fall (09/21-12/20)	-40.67%	-21.90%	-25.46%	-19.40%

Table 4-6. Riverine Flow Uncertainty Statistics - Alternative 4.

Alternative 4 Average Daily Flows Summary	—	—	—	—
Control Point (gage) and Season	25% Non-exceedance (Dry Year)	Average	Median	75% Non-exceedance (Wet Year)
Albany	—	—	—	—
Annual	-2.09%	-0.01%	0.15%	0.66%
Winter (12/21-03/20)	-0.03%	0.11%	0.66%	0.23%
Spring (03/21-06/20)	-11.70%	-3.32%	-1.94%	0.86%
Summer (06/21-09/20)	-2.50%	-0.71%	-2.95%	-2.27%
Fall (09/21-12/20)	6.26%	3.12%	2.67%	2.09%
Eugene	—	—	—	—
Annual	-3.56%	-0.03%	0.38%	1.24%
Winter (12/21-03/20)	-167%	0.30%	1.82%	1.17%

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Alternative 4 Average Daily Flows Summary	–	–	–	–
Spring (03/21-06/20)	-21.09%	-6.35%	-7.16%	1.20%
Summer (06/21-09/20)	-1.59%	-1.77%	-4.04%	-4.28%
Fall (09/21-12/20)	9.22%	5.25%	6.26%	3.32%
Goshen	–	–	–	–
Annual	-2.14%	-0.02%	0.35%	0.18%
Winter (12/21-03/20)	-0.51%	-0.17%	-0.24%	0.11%
Spring (03/21-06/20)	-16.89%	-2.26%	-1.25%	2.44%
Summer (06/21-09/20)	1.62%	1.36%	-0.88%	1.99%
Fall (09/21-12/20)	11.23%	1.90%	2.89%	-1.57%
Harrisburg	–	–	–	–
Annual	-2.55%	-0.02%	0.28%	0.58%
Winter (12/21-03/20)	-0.62%	0.15%	0.65%	0.08%
Spring (03/21-06/20)	-13.41%	-3.86%	-2.27%	1.12%
Summer (06/21-09/20)	-1.48%	-0.92%	-2.96%	-2.39%
Fall (09/21-12/20)	6.68%	3.73%	3.72%	1.87%
Jasper	–	–	–	–
Annual	-2.86%	-0.04%	-0.46%	1.01%
Winter (12/21-03/20)	-2.84%	0.55%	1.61%	1.89%
Spring (03/21-06/20)	-20.85%	-7.75%	-12.94%	-0.50%
Summer (06/21-09/20)	-0.88%	-2.18%	-4.52%	-5.95%
Fall (09/21-12/20)	11.34%	6.30%	8.89%	4.17%
Jefferson	–	–	–	–

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Alternative 4 Average Daily Flows Summary	—	—	—	—
Annual	-70%	0.00%	0.31%	0.64%
Winter (12/21-03/20)	-0.51%	-0.27%	-0.13%	0.25%
Spring (03/21-06/20)	-2.65%	-0.50%	0.80%	0.99%
Summer (06/21-09/20)	19.23%	15.28%	18.88%	14.75%
Fall (09/21-12/20)	-7.39%	-3.06%	-4.80%	-2.01%
Mehama	—	—	—	—
Annual	-1.51%	0.01%	-0.23%	0.68%
Winter (12/21-03/20)	-1.12%	-0.43%	-0.86%	0.08%
Spring (03/21-06/20)	-5.15%	-1.15%	-1.97%	0.93%
Summer (06/21-09/20)	8.56%	5.63%	8.87%	4.17%
Fall (09/21-12/20)	-3.84%	-0.51%	-1.63%	0.11%
Monroe	—	—	—	—
Annual	-0.03%	0.00%	0.01%	0.00%
Winter (12/21-03/20)	0.00%	0.00%	0.00%	0.00%
Spring (03/21-06/20)	0.19%	0.06%	0.11%	0.02%
Summer (06/21-09/20)	0.42%	0.22%	0.25%	0.08%
Fall (09/21-12/20)	-0.16%	-0.03%	-0.01%	0.00%
Salem	—	—	—	—
Annual	-1.74%	-0.01%	0.37%	0.50%
Winter (12/21-03/20)	0.00%	0.00%	0.60%	-0.05%
Spring (03/21-06/20)	-9.26%	-2.27%	-0.65%	0.76%
Summer (06/21-09/20)	3.55%	4.01%	3.78%	3.18%

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Alternative 4 Average Daily Flows Summary	–	–	–	–
Fall (09/21- 12/20)	1.29%	0.71%	-0.31%	0.43%
Vida	–	–	–	–
Annual	-1.16%	-0.01%	0.02%	0.46%
Winter (12/21- 03/20)	0.02%	0.00%	0.10%	-0.02%
Spring (03/21- 06/20)	-7.42%	-2.22%	-1.32%	1.16%
Summer (06/21- 09/20)	0.11%	-0.17%	-1.30%	-1.81%
Fall (09/21- 12/20)	4.76%	2.53%	2.39%	1.58%
Waterloo	–	–	–	–
Annual	1.22%	-0.01%	2.01%	0.29%
Winter (12/21- 03/20)	-0.36%	-0.32%	-0.21%	-0.40%
Spring (03/21- 06/20)	2.50%	0.22%	6.35%	1.57%
Summer (06/21- 09/20)	28.79%	23.52%	29.14%	27.27%
Fall (09/21- 12/20)	-13.20%	-6.82%	-8.10%	-5.90%

Note: N.E. = non-exceedance.

Note: NE = non-exceedance

Each of the values in Table 4-1 through Table 4-6 was calculated using an average flow from the No Action Alternative and a flow from the corresponding gage/season/alternative. For example, the average annual No Action Alternative flow for the Waterloo gage at the 25th percentile is 1,605.9 cubic feet per second (cfs) and 1,681.0 cfs for Alternative 3A. This equates to a change of +4.68% for Alternative 1 compared to the No Action Alternative as is shown in Table 4-1 in the Waterloo-Annual-25% N.E. cell. The abbreviation “N.E.” is short for “non-exceedance”. The 25% non-exceedance probability means that there is a 25% chance that the value will not be exceeded in a given year and a 75% chance that it will be exceeded.

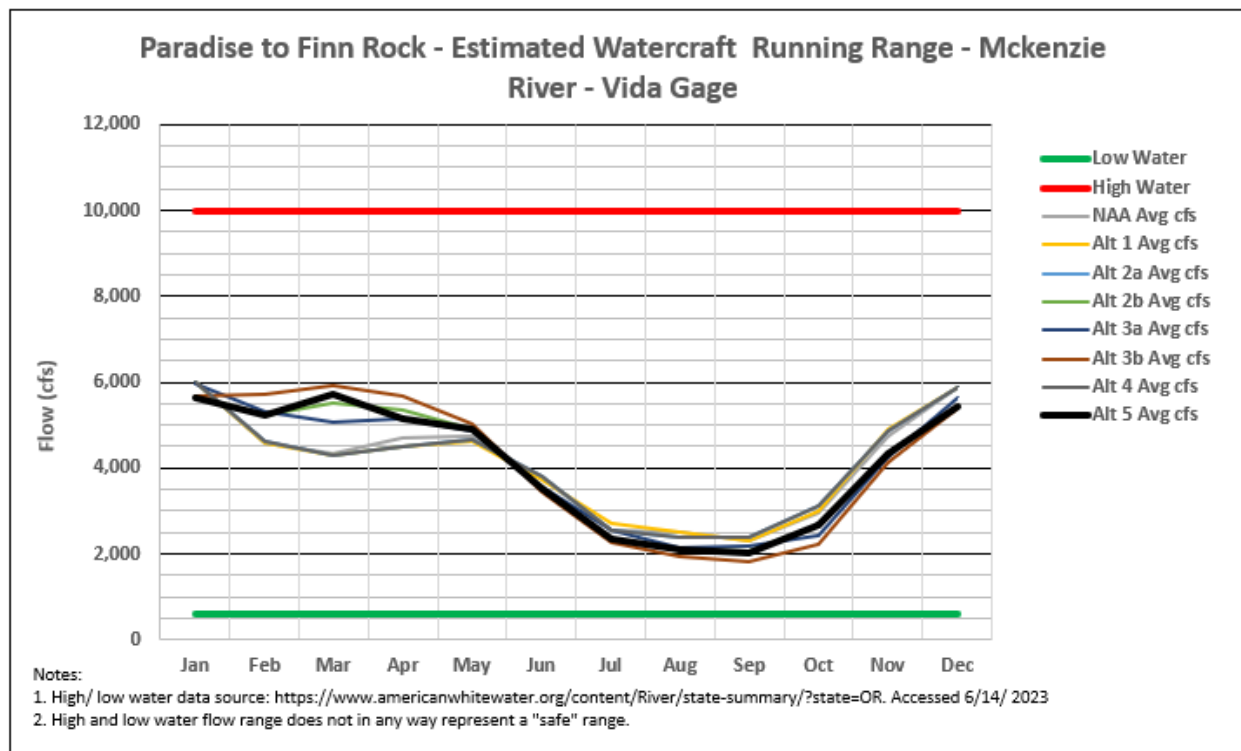
4.2 WHITEWATER RECREATION

The charts and data in this section show high and low water flow data concerning riverine watercraft operation compared to the EIS alternative estimated water flows at various river gage locations. This is not an exhaustive listing of riverine watercraft recreation reaches but does show some of the most popular areas along the McKenzie and North Santiam rivers where high/low range water flow data is available.

Paradise to Finn Rock – McKenzie River – River Mile Range 71.7 to 54.0

The graph below shows the high and low water flow ranges for operating recreational watercraft suitable for riverine activities such as kayaking and rafting from Paradise Campground to Finn Rock on the McKenzie River, as well as the estimated average monthly flows that are expected to occur under each alternative. The tabular data is shown below the graph.

Figure 4-2. Paradise to Finn Rock Estimated Watercraft Running Range, McKenzie River Vida, Oregon Gage.



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Table 4-7. Paradise to Finn Rock, Estimated Watercraft Running Range, McKenzie River, Vida Gage, Oregon.

Paradise to Finn Rock - Estimated Watercraft Running Range - Mckenzie River - Vida Gage										
Month	Low cfs	High cfs	NAA Avg cfs	Alt 1 Avg cfs	Alt 2a Avg cfs	Alt 2b Avg cfs	Alt 3a Avg cfs	Alt 3b Avg cfs	Alt 4 Avg cfs	Alt 5 Avg cfs
Jan	600	10,000	5,989	5,989	5,985	5,681	5,973	5,685	5,986	5,656
Feb	600	10,000	4,596	4,596	4,610	5,223	5,294	5,702	4,610	5,213
Mar	600	10,000	4,322	4,304	4,303	5,511	5,070	5,911	4,302	5,738
Apr	600	10,000	4,715	4,499	4,508	5,334	5,133	5,667	4,508	5,165
May	600	10,000	4,758	4,606	4,669	4,918	4,875	5,022	4,668	4,897
Jun	600	10,000	3,754	3,722	3,827	3,545	3,571	3,437	3,826	3,538
Jul	600	10,000	2,549	2,729	2,535	2,345	2,561	2,252	2,536	2,343
Aug	600	10,000	2,513	2,525	2,401	2,098	2,146	1,925	2,397	2,109
Sep	600	10,000	2,287	2,322	2,381	2,050	2,203	1,801	2,385	2,040
Oct	600	10,000	2,959	3,011	3,107	2,670	2,420	2,242	3,107	2,688
Nov	600	10,000	4,751	4,887	4,883	4,346	4,266	4,151	4,884	4,325
Dec	600	10,000	5,895	5,889	5,876	5,430	5,632	5,406	5,877	5,430

Olallie Campground to Paradise Campground – McKenzie River – River Mile Range 80.0 to 71.7

The graph below shows the high and low water flow ranges for operating recreational watercraft suitable for riverine activities such as kayaking and rafting from Olallie Campground to Paradise Campground on the McKenzie River, as well as the estimated average monthly flows that are expected to occur under each alternative. The tabular data is shown below the graph.

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Figure 4-3. Olallie Campground to Paradise Campground, Estimated Watercraft Running Range, McKenzie, Vida River Gage, Oregon.

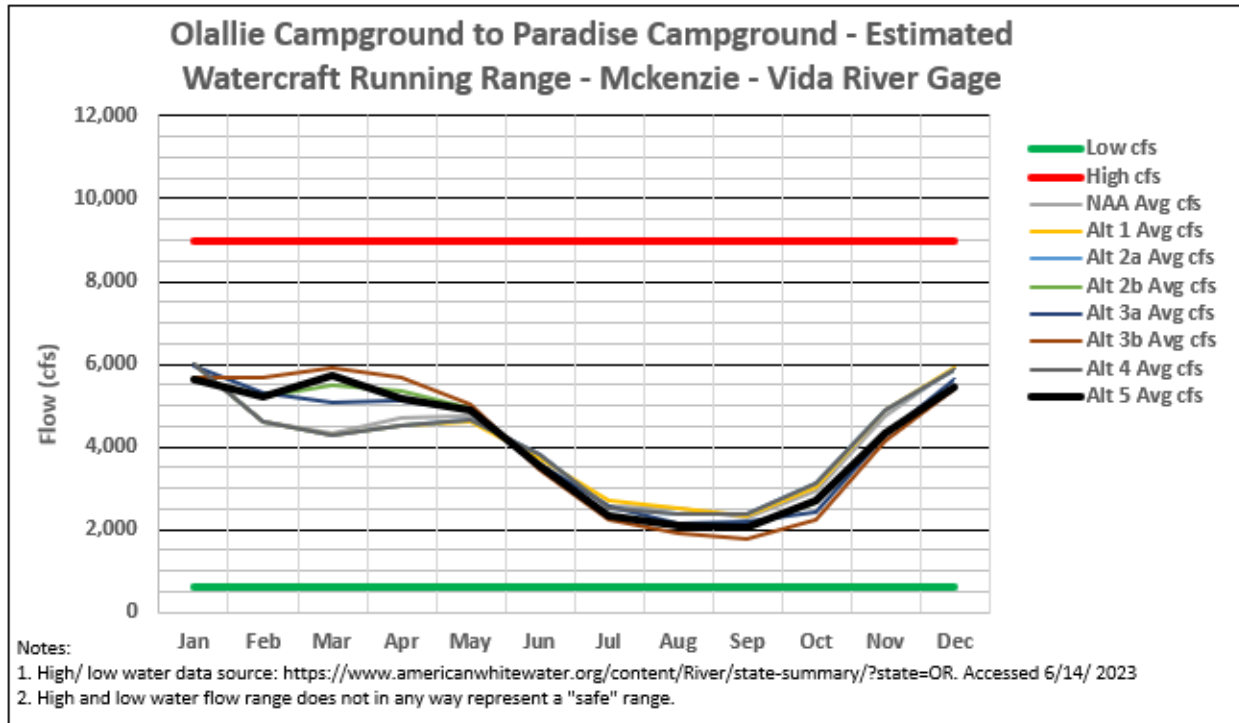


Table 4-8. Olallie Campground to Paradise Campground, Estimated Watercraft Running Range, McKenzie, Vida River Gage, Oregon.

Olallie Campground to Paradise Campground - Estimated Watercraft Running Range - Mckenzie - Vida River Gage										
Month	Low cfs	High cfs	NAA Avg cfs	Alt 1 Avg cfs	Alt 2a Avg cfs	Alt 2b Avg cfs	Alt 3a Avg cfs	Alt 3b Avg cfs	Alt 4 Avg cfs	Alt 5 Avg cfs
Jan	600	9,000	5,989	5,989	5,985	5,681	5,973	5,685	5,986	5,656
Feb	600	9,000	4,596	4,596	4,610	5,223	5,294	5,702	4,610	5,213
Mar	600	9,000	4,322	4,304	4,303	5,511	5,070	5,911	4,302	5,738
Apr	600	9,000	4,715	4,499	4,508	5,334	5,133	5,667	4,508	5,165
May	600	9,000	4,758	4,606	4,669	4,918	4,875	5,022	4,668	4,897
Jun	600	9,000	3,754	3,722	3,827	3,545	3,571	3,437	3,826	3,538
Jul	600	9,000	2,549	2,729	2,535	2,345	2,561	2,252	2,536	2,343
Aug	600	9,000	2,513	2,525	2,401	2,098	2,146	1,925	2,397	2,109
Sep	600	9,000	2,287	2,322	2,381	2,050	2,203	1,801	2,385	2,040
Oct	600	9,000	2,959	3,011	3,107	2,670	2,420	2,242	3,107	2,688
Nov	600	9,000	4,751	4,887	4,883	4,346	4,266	4,151	4,884	4,325
Dec	600	9,000	5,895	5,889	5,876	5,430	5,632	5,406	5,877	5,430

Finn Rock to Leaburg Dam – McKenzie River – River Mile Range 54.0 to 38.8

The graph below shows the high and low water flow ranges for operating recreational watercraft suitable for riverine activities such as kayaking and rafting from Finn Rock to Leaburg Dam on the McKenzie River, as well as the estimated average monthly flows that are expected to occur under each alternative. The tabular data is shown below the graph.

Figure 4-4. Finn Rock to Leaburg Dam, Estimated Watercraft Running Range, McKenzie River, Vida Gage, Oregon.

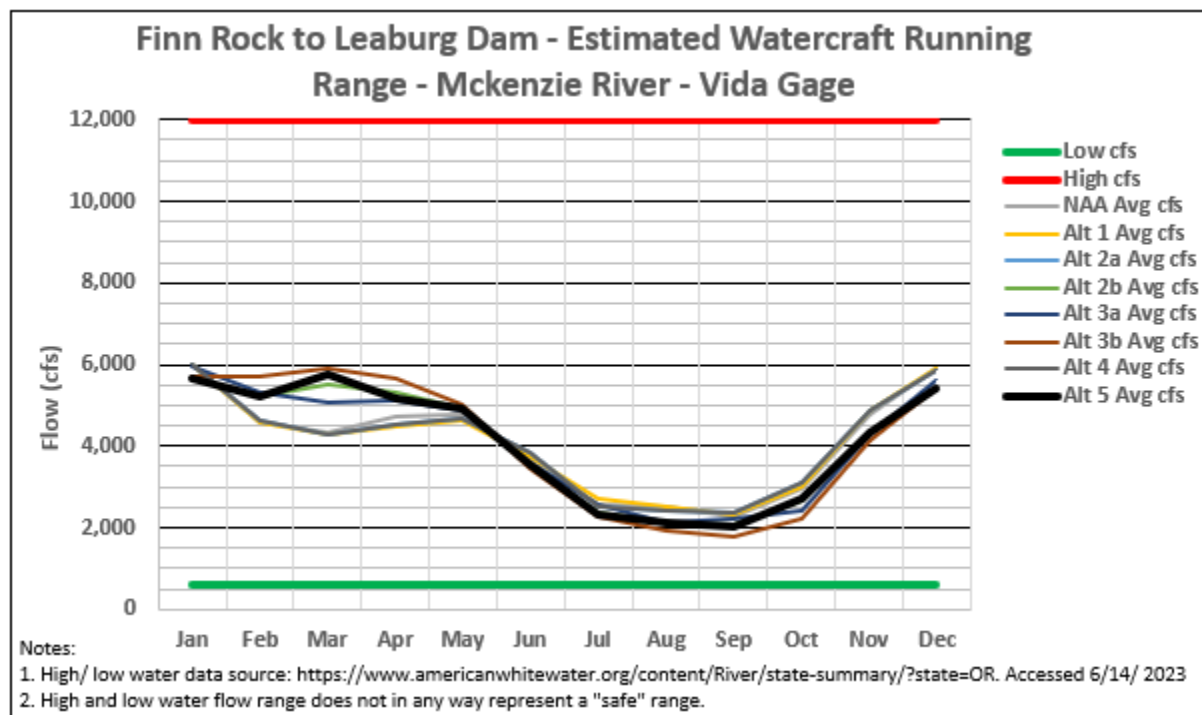


Table 4-9. Finn Rock to Leaburg Dam, Estimated Watercraft Running Range, McKenzie River, Vida Gage, Oregon.

Finn Rock to Leaburg Dam - Estimated Watercraft Running Range - Mckenzie River - Vida Gage										
Month	Low cfs	High cfs	NAA Avg cfs	Alt 1 Avg cfs	Alt 2a Avg cfs	Alt 2b Avg cfs	Alt 3a Avg cfs	Alt 3b Avg cfs	Alt 4 Avg cfs	Alt 5 Avg cfs
Jan	600	12,000	5,989	5,989	5,985	5,681	5,973	5,685	5,986	5,656
Feb	600	12,000	4,596	4,596	4,610	5,223	5,294	5,702	4,610	5,213
Mar	600	12,000	4,322	4,304	4,303	5,511	5,070	5,911	4,302	5,738
Apr	600	12,000	4,715	4,499	4,508	5,334	5,133	5,667	4,508	5,165
May	600	12,000	4,758	4,606	4,669	4,918	4,875	5,022	4,668	4,897
Jun	600	12,000	3,754	3,722	3,827	3,545	3,571	3,437	3,826	3,538
Jul	600	12,000	2,549	2,729	2,535	2,345	2,561	2,252	2,536	2,343
Aug	600	12,000	2,513	2,525	2,401	2,098	2,146	1,925	2,397	2,109
Sep	600	12,000	2,287	2,322	2,381	2,050	2,203	1,801	2,385	2,040

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Oct	600	12,000	2,959	3,011	3,107	2,670	2,420	2,242	3,107	2,688
Nov	600	12,000	4,751	4,887	4,883	4,346	4,266	4,151	4,884	4,325
Dec	600	12,000	5,895	5,889	5,876	5,430	5,632	5,406	5,877	5,430

Coast Fork/ Middle Fork Confluence to Alton Baker Park – Willamette River – River Mile Range 187.0 to 182.7

The graph below shows the high and low water flow ranges for operating recreational watercraft suitable for riverine activities such as kayaking and rafting from the Coast Fork/Middle Fork confluence to Alton Baker Park on the Willamette River in Eugene OR, as well as the estimated average monthly flows that are expected to occur under each alternative. The tabular data is shown below the graph.

Figure 4-5. Coast Fork/Middle Fork Confluence to Alton Baker Park, Estimated Watercraft Running Range, Willamette River, Eugene Gage, Oregon.

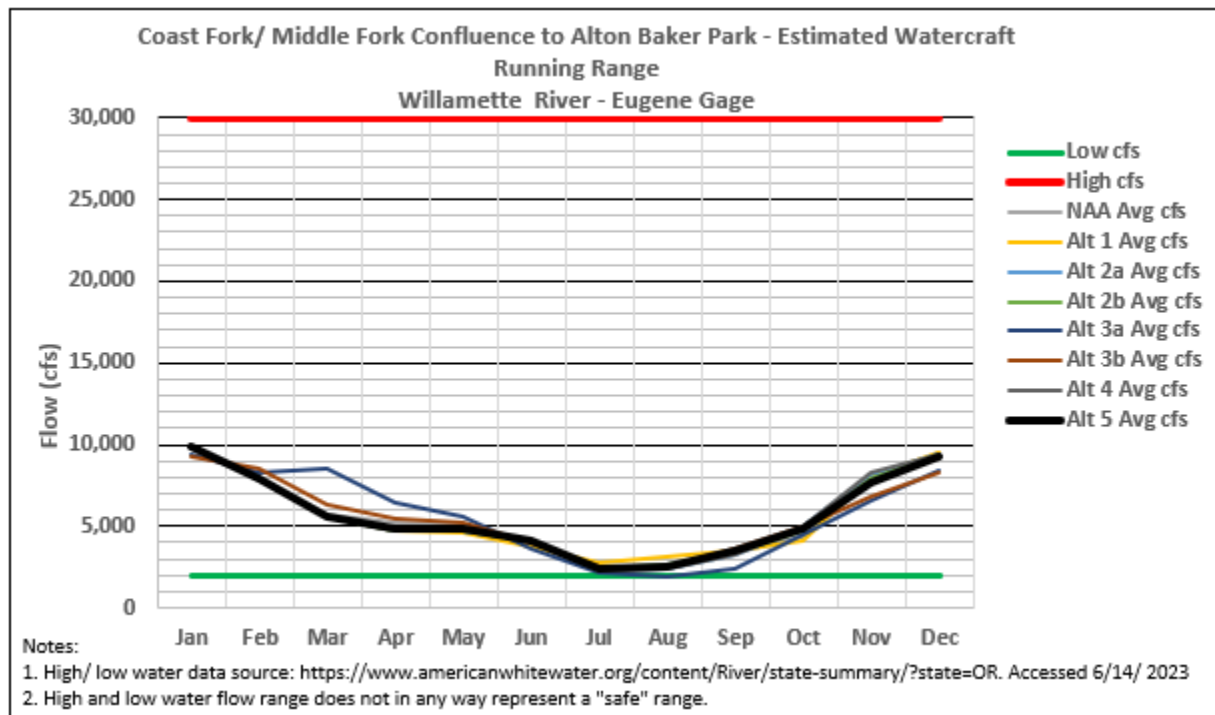


Table 4-10. Coast Fork/Middle Fork Confluence to Alton Baker Park, Estimated Watercraft Running Range, Willamette River, Eugene Gage, Oregon.

Coast Fork/ Middle Fork Confluence to Alton Baker Park - Estimated Watercraft Running Range - Willamette River - Eugene Gage										
Month	Low cfs	High cfs	NAA Avg Flow	Alt 1 Avg Flow	Alt 2a Avg Flow	Alt 2b Avg Flow	Alt 3a Avg Flow	Alt 3b Avg Flow	Alt 4 Avg Flow	Alt 5 Avg Flow
Jan	2,000	30,000	9,910	9,898	9,839	9,937	9,371	9,278	9,850	9,926

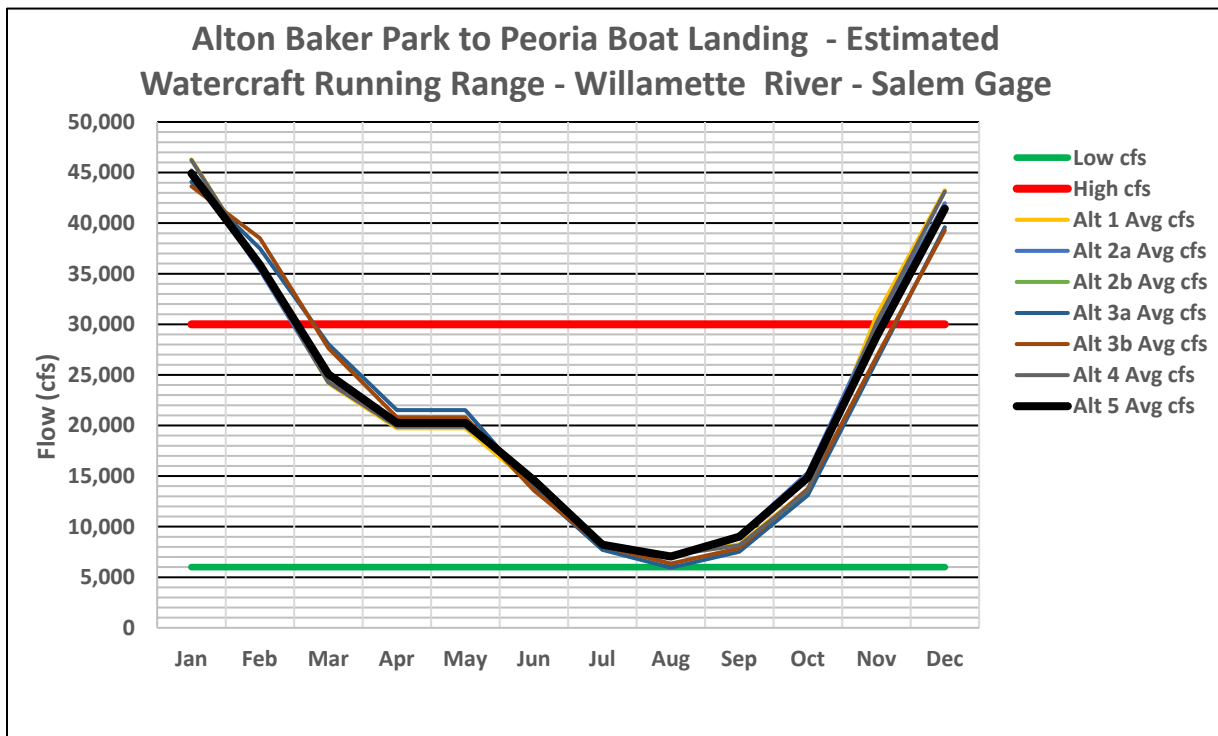
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Feb	2,000	30,000	7,733	7,975	7,959	7,867	8,283	8,483	7,959	7,879
Mar	2,000	30,000	5,746	5,623	5,616	5,633	8,581	6,317	5,625	5,634
Apr	2,000	30,000	5,252	4,716	4,723	4,719	6,395	5,513	4,728	4,869
May	2,000	30,000	5,104	4,644	4,765	4,780	5,617	5,233	4,755	4,849
Jun	2,000	30,000	4,013	3,778	4,145	4,148	3,592	4,054	4,143	4,174
Jul	2,000	30,000	2,250	2,710	2,273	2,384	2,125	2,549	2,277	2,397
Aug	2,000	30,000	2,552	3,081	2,380	2,617	1,875	2,549	2,389	2,571
Sep	2,000	30,000	3,353	3,491	3,238	3,422	2,359	3,597	3,222	3,442
Oct	2,000	30,000	4,409	4,107	4,985	4,739	4,490	5,016	4,997	4,859
Nov	2,000	30,000	7,760	8,071	8,204	7,915	6,525	6,758	8,248	7,635
Dec	2,000	30,000	9,477	9,452	9,434	9,395	8,353	8,297	9,367	9,323

Alton Baker Park to Peoria Boat Landing – Willamette River – River Mile Range 182.7 to 141.1

The graph below shows the high and low water flow ranges for operating recreational watercraft suitable for riverine activities such as kayaking and rafting from Alton Baker Park to the Peoria Boat Landing on the Willamette River, as well as the estimated average monthly flows that are expected to occur under each alternative. The tabular data is shown below the graph.

Figure 4-6. Alton Baker Park to Peoria Boat Landing, Estimated Watercraft Running Range, Willamette River, Salem Gage, Oregon.



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Table 4-11. Alton Baker Park to Peoria Boat Landing, Estimated Watercraft Running Range, Willamette River, Salem Gage, Oregon.

Alton Baker Park to Peoria Boat Landing - Estimated Watercraft Running Range - Willamette River - Salem Gage										
Month	Low cfs	High cfs	NAA Avg Flow	Alt 1 Avg Flow	Alt 2a Avg Flow	Alt 2b Avg Flow	Alt 3a Avg Flow	Alt 3b Avg Flow	Alt 4 Avg Flow	Alt 5 Avg Flow
Jan	6,000	30,000	46,332	46,304	45,219	44,979	44,080	43,643	46,238	44,917
Feb	6,000	30,000	35,385	35,625	35,349	35,830	37,494	38,497	35,631	35,877
Mar	6,000	30,000	25,213	24,163	24,273	25,109	28,030	27,647	24,288	25,065
Apr	6,000	30,000	20,312	19,721	19,883	20,194	21,512	20,810	19,901	20,250
May	6,000	30,000	20,312	19,721	19,883	20,194	21,512	20,810	19,901	20,250
Jun	6,000	30,000	14,417	13,983	14,814	14,566	13,774	13,585	14,825	14,590
Jul	6,000	30,000	7,589	8,041	8,303	8,200	7,714	8,058	8,297	8,218
Aug	6,000	30,000	6,821	7,287	7,173	7,115	5,952	6,350	7,187	7,044
Sep	6,000	30,000	8,787	8,256	9,141	9,005	7,521	7,875	8,150	9,012
Oct	6,000	30,000	13,201	13,691	15,330	14,690	13,105	13,743	13,538	14,851
Nov	6,000	30,000	29,697	30,867	29,916	29,050	26,375	26,768	30,141	28,757
Dec	6,000	30,000	43,270	43,261	41,966	41,476	39,591	39,289	43,116	41,438

Mill City to Mehama – North Santiam River – River Mile Range 47.5 to 38.6

The graph below shows the high and low water flow ranges for operating recreational watercraft suitable for riverine activities such as kayaking and rafting from Mill City OR to Mehama OR on the North Santiam River, as well as the estimated average monthly flows that are expected to occur under each alternative. The tabular data is shown below the graph.

Figure 4-7. Mill City to Megama, Estimated Watercraft Running Range, North Santiam River, Mehama Gage, Oregon.

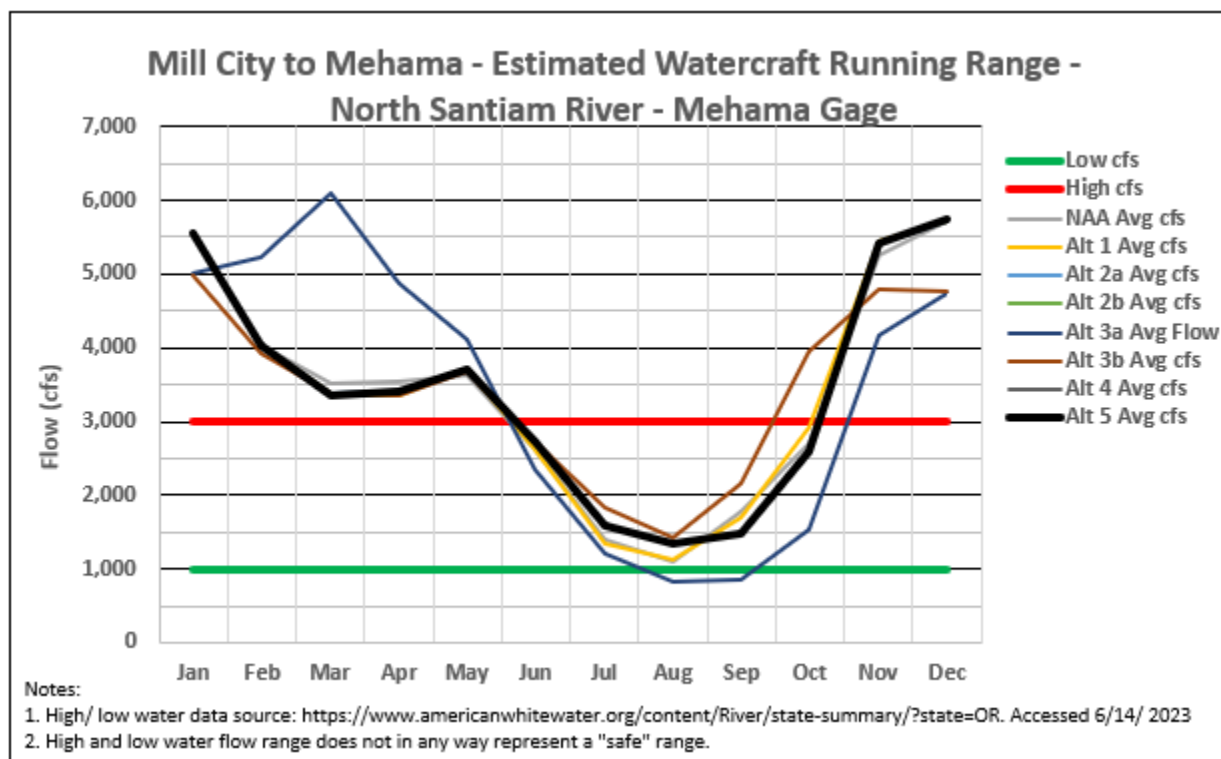


Table 4-12. Mill City to Mehama, Estimated Running Range, North Santiam River, Mehama Gage, Oregon.

Mill City to Mehama - Estimated Watercraft Running Range - North Santiam River - Mehama Gage										
Month	Low cfs	High cfs	NAA Avg Flow	Alt 1 Avg Flow	Alt 2a Avg Flow	Alt 2b Avg Flow	Alt 3a Avg Flow	Alt 3b Avg Flow	Alt 4 Avg Flow	Alt 5 Avg Flow
Jan	1,000	3,000	5,571	5,560	5,565	5,563	4,997	4,972	5,559	5,562
Feb	1,000	3,000	4,021	4,025	4,006	4,019	5,241	3,912	4,025	4,021
Mar	1,000	3,000	3,526	3,372	3,373	3,357	6,108	3,377	3,372	3,357
Apr	1,000	3,000	3,536	3,356	3,410	3,409	4,874	3,347	3,413	3,409
May	1,000	3,000	3,638	3,717	3,704	3,702	4,107	3,674	3,700	3,700
Jun	1,000	3,000	2,632	2,614	2,726	2,725	2,353	2,719	2,725	2,725
Jul	1,000	3,000	1,410	1,351	1,596	1,596	1,208	1,832	1,596	1,596
Aug	1,000	3,000	1,112	1,112	1,336	1,336	824	1,412	1,336	1,336
Sep	1,000	3,000	1,783	1,708	1,469	1,469	854	2,148	1,469	1,469
Oct	1,000	3,000	2,698	2,911	2,598	2,598	1,546	3,959	2,598	2,598
Nov	1,000	3,000	5,259	5,440	5,405	5,408	4,175	4,781	5,407	5,405
Dec	1,000	3,000	5,727	5,722	5,724	5,732	4,745	4,763	5,713	5,735

Mehama to Stayton– North Santiam River – River Mile Range 38.6 to 28.5

The graph below shows the high and low water flow ranges for operating recreational watercraft suitable for riverine activities such as kayaking and rafting from Mehama OR to Stayton OR on the North Santiam River, as well as the estimated average monthly flows that are expected to occur under each alternative. The tabular data is shown below the graph.

Figure 4-8. Mehama to Stayton, Estimated Running Range, North Santiam River, Mehama Gage, Oregon.

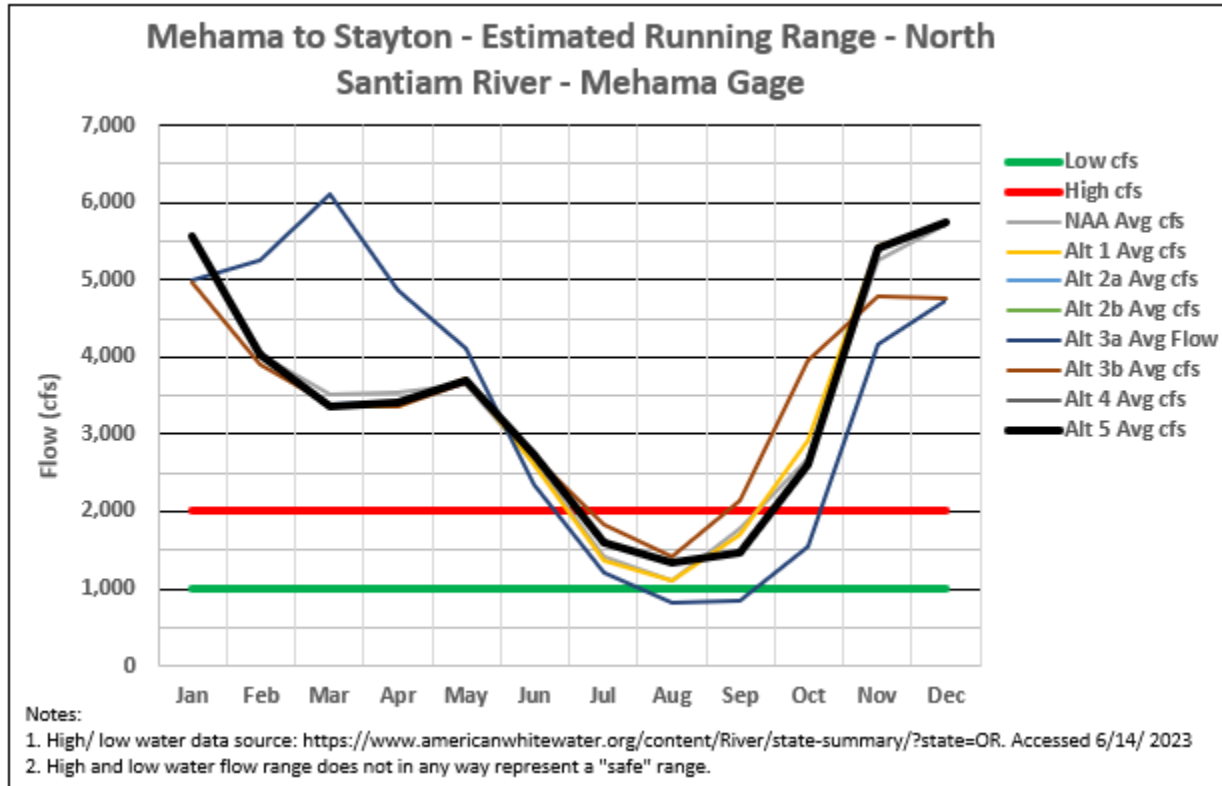


Table 4-13. Mehama to Stayton, Estimated Running Range, North Santiam River, Mehama Gage, Oregon.

Mehama to Stayton - Estimated Running Range - North Santiam River - Mehama Gage										
Month	Low cfs	High cfs	NAA Avg Flow	Alt 1 Avg Flow	Alt 2a Avg Flow	Alt 2b Avg Flow	Alt 3a Avg Flow	Alt 3b Avg Flow	Alt 4 Avg Flow	Alt 5 Avg Flow
Jan	1,000	2,000	5,571	5,560	5,565	5,563	4,997	4,972	5,559	5,562
Feb	1,000	2,000	4,021	4,025	4,006	4,019	5,241	3,912	4,025	4,021
Mar	1,000	2,000	3,526	3,372	3,373	3,357	6,108	3,377	3,372	3,357
Apr	1,000	2,000	3,536	3,356	3,410	3,409	4,874	3,347	3,413	3,409
May	1,000	2,000	3,638	3,717	3,704	3,702	4,107	3,674	3,700	3,700
Jun	1,000	2,000	2,632	2,614	2,726	2,725	2,353	2,719	2,725	2,725
Jul	1,000	2,000	1,410	1,351	1,596	1,596	1,208	1,832	1,596	1,596

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Aug	1,000	2,000	1,112	1,112	1,336	1,336	824	1,412	1,336	1,336
Sep	1,000	2,000	1,783	1,708	1,469	1,469	854	2,148	1,469	1,469
Oct	1,000	2,000	2,698	2,911	2,598	2,598	1,546	3,959	2,598	2,598
Nov	1,000	2,000	5,259	5,440	5,405	5,408	4,175	4,781	5,407	5,405
Dec	1,000	2,000	5,727	5,722	5,724	5,732	4,745	4,763	5,713	5,735

CHAPTER 5 - RECREATION EFFECTS – REGIONAL ECONOMIC DEVELOPMENT

5.1 ASSUMPTIONS AND METHODOLOGY

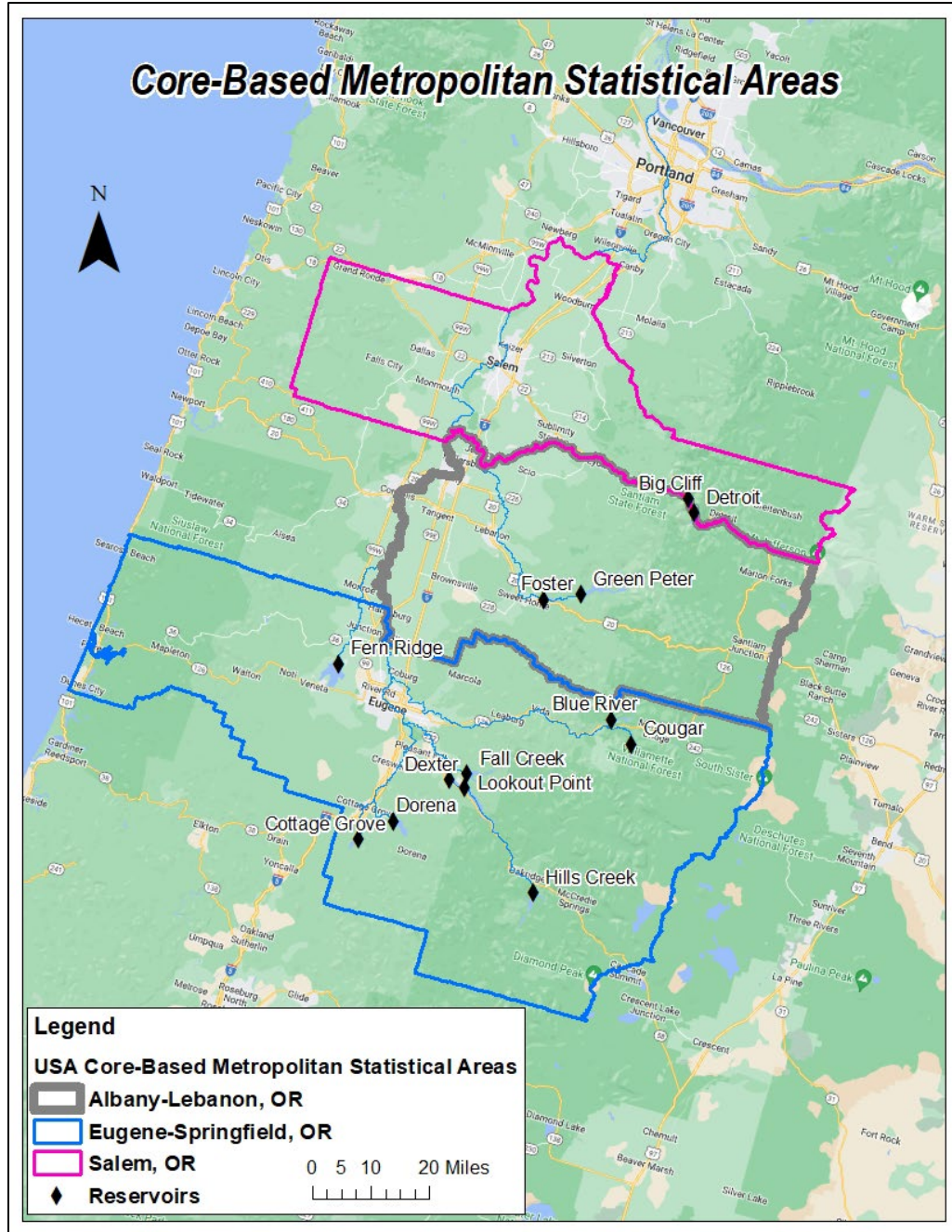
Using the NED methodology and spatial framework of evaluating impacts to lake-borne activities, the PDT is able to reasonably ascertain how the impacts from reservoir elevation will translate into a loss (or gain) in recreation-based visits to any given USACE operated reservoir. The loss or gain in visitation-induced economic activity will translate into a dollar total that will then produce a multiplier. A multiplier can be defined as “the proportional amount of increase or decrease in final income that results from an injection or withdrawal of spending.” These activities and expenditures support economic output, jobs, earnings, and value added. Results are shown for three levels of geography: local, state, and national impact areas.

To accomplish the evaluation, visitation numbers, produced in the NED analysis were input in the USACE Regional Economic System (RECONS) Programs and Infrastructure Module, developed by the USACE Institute for Water Resources (IWR). This RECONS module application estimates the regional recreation-related economic impacts resulting from the existence of USACE projects.

For the purposes of this regional economic analysis, the value of the regional output is predicated on the average annual visitation. The multiplier effect associated with results of the uncertainty analysis do not produce substantial variance from the average value of site visitation. This RED analysis also assumes that 80% of people who visit the reservoirs are local (live within the CBSA), and 20% are non-local.

Local area RECONS results are aggregated to the three U.S. Census Bureau Core-based Metropolitan Statistical Areas (CBSA) in which the projects are located, and therefore visitations and subsequent direct economic activity will take place. CBSA's include Eugene-Springfield, Albany-Lebanon, and Salem as shown on the map below. Results are then aggregated at the state level, then the national level.

Figure 5-1. Core-based Metropolitan Statistical Areas Map.



5.2 RED ECONOMIC RESULTS BY ALTERNATIVE

The tables below show the results of the RECONS regional economic development modeling across the various alternatives and CBSA-based geographic areas, both combined (full system effects) and individual (CBSA-specific effects). Also shown are results by industry sector. The “Local” area is the actual CBSA in which reservoir-induced visitation and direct economic activity (e.g. - person-to-business monetary transactions that occur because of the existence of

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the reservoir) take place. The “State” and “U.S.” areas are the State of Oregon and United States, respectively. The last four tables under each action alternative show the difference between the no action and the applicable action alternative.

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Table 5-1a to Table 5-1d. Average Annual Regional Economic Impacts as Overall Summary and Local, State, and United States Impacts under the No-action Alternative.

a. Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - NAA					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		\$199,874,887	530	\$82,318,213	\$119,017,899
Secondary Impact		\$142,434,661	804	\$46,914,993	\$78,793,114
Total Impact	\$199,874,887	\$342,309,548	702	\$129,233,206	\$197,811,013
State					
Direct Impact		\$224,159,588	573	\$90,193,996	\$130,595,756
Secondary Impact		\$195,628,793	1,015	\$65,989,980	\$109,585,309
Total Impact	\$224,159,588	\$419,788,380	854	\$156,183,976	\$240,181,065
US					
Direct Impact		\$353,401,432	627	\$104,242,689	\$169,338,543
Secondary Impact		\$545,619,397	639	\$165,338,184	\$287,227,647
Total Impact	\$353,401,432	\$899,020,828	302	\$269,580,873	\$456,566,191

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

b. Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level – No-action Alternative.					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$656,802	1.9	\$63,774	\$82,690
154	Petroleum refineries	\$0	0.0	\$0	\$0

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382	Sporting and athletic goods manufacturing	\$227,499	0.9	\$61,081	\$61,070
391	All other miscellaneous manufacturing	\$462,796	3.0	\$140,126	\$140,603
396	Wholesale - Other durable goods merchant wholesalers	\$9,353,518	39.0	\$2,818,212	\$4,516,367
398	Wholesale - Grocery and related product wholesalers	\$5,862,886	30.6	\$2,013,384	\$2,776,250
399	Wholesale - Petroleum and petroleum products	\$22,094,180	15.4	\$1,408,088	\$19,172,188
406	Retail - Food and beverage stores	\$23,295,927	278.7	\$11,341,210	\$13,704,999
408	Retail - Gasoline stores	\$25,124,308	209.3	\$9,715,281	\$12,329,790
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,290,490	86.8	\$2,698,625	\$3,004,179
412	Retail - Miscellaneous store retailers	\$7,866,884	148.0	\$4,663,706	\$4,550,297
417	Truck transportation	\$2,562,177	12.5	\$1,119,633	\$1,313,460
504	Other amusement and recreation industries	\$19,958,178	306.9	\$8,001,672	\$10,837,674
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,310,523	578.3	\$21,645,646	\$29,464,777
512	Automotive repair and maintenance, except car washes	\$25,808,716	215.4	\$16,627,773	\$17,063,555
	Direct Impact	\$199,874,887	1926.5	\$82,318,213	\$119,017,899
	Secondary Impact	\$142,434,661	804.0	\$46,914,993	\$78,793,114
	Total Impact	\$342,309,548	2730.5	\$129,233,206	\$197,811,013

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

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⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

c. State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level – No-action Alternative.					
IMPLA N Sectors	Industries	Output	Jobs*	Labor Income	Value Added
	Direct Impacts				
103	All other food manufacturing	\$13,709,328	40.2	\$1,829,766	\$2,373,257
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$1,706,466	7.0	\$460,908	\$460,870
391	All other miscellaneous manufacturing	\$3,019,179	20.9	\$1,007,432	\$1,001,373
396	Wholesale - Other durable goods merchant wholesalers	\$12,373,307	51.9	\$4,076,158	\$6,486,579
398	Wholesale - Grocery and related product wholesalers	\$7,413,323	38.5	\$2,715,312	\$3,747,260
399	Wholesale - Petroleum and petroleum products	\$24,418,595	17.4	\$1,596,727	\$21,209,163
406	Retail - Food and beverage stores	\$23,295,927	278.7	\$11,685,104	\$14,070,997
408	Retail - Gasoline stores	\$25,124,308	212.6	\$10,081,067	\$12,671,093
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,290,490	86.8	\$2,770,008	\$3,072,641
412	Retail - Miscellaneous store retailers	\$7,866,884	151.9	\$4,778,605	\$4,666,847
417	Truck transportation	\$2,864,365	14.4	\$1,256,643	\$1,464,951
504	Other amusement and recreation industries	\$19,958,178	307.3	\$9,094,800	\$11,734,418
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0

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509	Full-service restaurants	\$51,310,523	578.3	\$22,131,935	\$30,492,176
512	Automotive repair and maintenance, except car washes	\$25,808,716	216.3	\$16,709,533	\$17,144,132
	Direct Impact	\$224,159,588	2021.9	\$90,193,996	\$130,595,756
	Secondary Impact	\$195,628,793	1014.9	\$65,989,980	\$109,585,309
	Total Impact	\$419,788,380	3036.8	\$156,183,976	\$240,181,065

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

d. U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level – No-action Alternative.					
IMPLA N Sectors	Industries	Output	Jobs*	Labor Income	Value Added
	Direct Impacts				
103	All other food manufacturing	\$46,590,215	136.3	\$7,579,332	\$10,180,715
154	Petroleum refineries	\$78,517,909	7.7	\$2,094,714	\$17,663,589
382	Sporting and athletic goods manufacturing	\$8,933,734	36.5	\$2,414,043	\$3,062,860
391	All other miscellaneous manufacturing	\$7,227,750	50.2	\$2,581,973	\$3,002,396
396	Wholesale - Other durable goods merchant wholesalers	\$15,484,986	64.9	\$5,101,243	\$8,333,181
398	Wholesale - Grocery and related product wholesalers	\$8,319,974	43.1	\$3,056,023	\$4,370,837
399	Wholesale - Petroleum and petroleum products	\$26,520,102	18.8	\$1,758,147	\$23,533,070
406	Retail - Food and beverage stores	\$23,295,927	278.7	\$11,685,104	\$14,553,516
408	Retail - Gasoline stores	\$25,124,308	212.6	\$10,081,067	\$14,481,026

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410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,290,490	86.8	\$2,770,008	\$3,364,427
412	Retail - Miscellaneous store retailers	\$7,866,884	151.9	\$4,778,605	\$4,983,033
417	Truck transportation	\$3,151,736	16.8	\$1,380,235	\$1,609,171
504	Other amusement and recreation industries	\$19,958,178	307.3	\$10,120,728	\$12,012,739
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,310,523	578.3	\$22,131,935	\$30,492,176
512	Automotive repair and maintenance, except car washes	\$25,808,716	216.3	\$16,709,533	\$17,695,810
	Direct Impact	\$353,401,432	2206.3	\$104,242,689	\$169,338,543
	Secondary Impact	\$545,619,397	2274.3	\$165,338,184	\$287,227,647
	Total Impact	\$899,020,828	4480.6	\$269,580,873	\$456,566,191

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Table 5-2. Average Annual Regional Economic Tables, Alternative 1

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alternative 1.					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ₄	Value Added ⁵
Local					
Direct Impact		\$201,600,097	\$535	\$83,013,731	\$120,047,358
Secondary Impact		\$143,683,470	\$811	\$47,329,832	\$79,488,541

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Total Impact	\$201,600,097	\$345,283,568	\$709	\$130,343,563	\$199,535,899
State					
Direct Impact		\$226,048,876	\$578	\$90,949,194	\$131,697,654
Secondary Impact		\$197,274,389	\$1,023	\$66,545,203	\$110,507,056
Total Impact	\$226,048,876	\$423,323,266	\$862	\$157,494,397	\$242,204,711
US					
Direct Impact		\$356,369,107	\$632	\$105,116,354	\$170,759,243
Secondary Impact		\$550,208,639	\$645	\$166,728,959	\$289,643,012
Total Impact	\$377,509,647	\$960,357,781	331.3	\$287,971,729	\$487,714,254

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level – Alternative 1.					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$665,381	\$2	\$64,903	\$84,148
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$229,451	0.9	\$61,619	\$61,608
391	All other miscellaneous manufacturing	\$465,570	3.0	\$140,903	\$141,385
396	Wholesale - Other durable goods merchant wholesalers	\$9,446,128	39.5	\$2,844,650	\$4,559,126
398	Wholesale - Grocery and related product wholesalers	\$5,920,588	31.0	\$2,033,417	\$2,803,906

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399	Wholesale - Petroleum and petroleum products	\$22,304,675	15.5	\$1,420,801	\$19,354,540
406	Retail - Food and beverage stores	\$23,494,099	281.2	\$11,436,277	\$13,820,787
408	Retail - Gasoline stores	\$25,333,938	211.1	\$9,794,754	\$12,432,210
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,335,026	87.6	\$2,720,715	\$3,028,928
412	Retail - Miscellaneous store retailers	\$7,933,467	149.3	\$4,702,226	\$4,587,719
417	Truck transportation	\$2,582,550	12.6	\$1,128,456	\$1,323,816
504	Other amusement and recreation industries	\$20,126,409	309.3	\$8,073,189	\$10,932,246
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,745,301	583.1	\$21,830,257	\$29,716,045
512	Automotive repair and maintenance, except car washes	\$26,017,518	217.1	\$16,761,564	\$17,200,895
	Direct Impact	\$201,600,097	1942.8	\$83,013,731	\$120,047,358
	Secondary Impact	\$143,683,470	811.1	\$47,329,832	\$79,488,541
	Total Impact	\$345,283,568	2753.7	\$130,343,563	\$199,535,899

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level – Alternative 1 .					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴

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	Direct Impacts				
103	All other food manufacturing	\$13,825,949	40.4	\$1,846,537	\$2,394,958
154	Petroleum refineries	\$0	0.0	\$0	0.0
382	Sporting and athletic goods manufacturing	\$1,720,832	7.0	\$464,936	\$464,888
391	All other miscellaneous manufacturing	\$3,044,731	21.2	\$1,016,084	\$1,009,944
396	Wholesale - Other durable goods merchant wholesalers	\$12,477,544	52.4	\$4,110,498	\$6,541,224
398	Wholesale - Grocery and related product wholesalers	\$7,476,387	38.8	\$2,738,410	\$3,779,137
399	Wholesale - Petroleum and petroleum products	\$24,629,778	17.5	\$1,610,487	\$21,392,567
406	Retail - Food and beverage stores	\$23,494,099	281.2	\$11,784,070	\$14,190,696
408	Retail - Gasoline stores	\$25,333,938	214.4	\$10,163,522	\$12,776,296
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,335,026	87.6	\$2,793,236	\$3,098,507
412	Retail - Miscellaneous store retailers	\$7,933,467	153.2	\$4,818,484	\$4,705,618
417	Truck transportation	\$2,887,899	14.5	\$1,266,901	\$1,476,912
504	Other amusement and recreation industries	\$20,126,409	309.8	\$9,172,117	\$11,833,800
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,745,301	583.1	\$22,319,424	\$30,750,549
512	Automotive repair and maintenance, except car washes	\$26,017,518	218.1	\$16,844,492	\$17,282,557
	Direct Impact	\$226,048,876	2038.9	\$90,949,194	\$131,697,654
	Secondary Impact	\$197,274,389	1023.3	\$66,545,203	\$110,507,056

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	Total Impact	\$423,323,266	3062.3	\$157,494,397	\$242,204,711
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¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alternative 1.					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$46,986,546	137.4	\$7,644,820	\$10,267,663
154	Petroleum refineries	\$79,173,044	7.7	\$2,112,192	\$17,810,971
382	Sporting and athletic goods manufacturing	\$9,008,941	36.8	\$2,435,124	\$3,088,643
391	All other miscellaneous manufacturing	\$7,288,923	50.7	\$2,604,078	\$3,027,806
396	Wholesale - Other durable goods merchant wholesalers	\$15,615,436	65.5	\$5,144,218	\$8,403,381
398	Wholesale - Grocery and related product wholesalers	\$8,390,750	43.5	\$3,082,019	\$4,408,017
399	Wholesale - Petroleum and petroleum products	\$26,741,380	19.0	\$1,772,814	\$23,729,424
406	Retail - Food and beverage stores	\$23,494,099	281.2	\$11,784,070	\$14,677,320
408	Retail - Gasoline stores	\$25,333,938	214.4	\$10,163,522	\$14,601,852
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,335,026	87.6	\$2,793,236	\$3,392,748
412	Retail - Miscellaneous store retailers	\$7,933,467	153.2	\$4,818,484	\$5,025,208
417	Truck transportation	\$3,178,330	17.1	\$1,391,827	\$1,622,688

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504	Other amusement and recreation industries	\$20,126,409	309.8	\$10,206,038	\$12,113,995
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,745,301	583.1	\$22,319,424	\$30,750,549
512	Automotive repair and maintenance, except car washes	\$26,017,518	218.1	\$16,844,492	\$17,838,974
	Direct Impact	\$356,369,107	2224.8	\$105,116,354	\$170,759,243
	Secondary Impact	\$550,208,639	2293.4	\$166,728,959	\$289,643,012
	Total Impact	\$906,577,745	4518.2	\$271,845,312	\$460,402,256

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alternative 1 Change From No-action Alternative.					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		\$2,987,578	8.3	\$1,215,422	\$1,781,151
Secondary Impact		\$2,148,397	12.2	\$711,144	\$1,193,068
Total Impact	\$2,987,578	\$5,135,975	11.1	\$1,926,566	\$2,974,218
State		\$0	0.0	\$0	\$0
Direct Impact		\$3,305,033	8.7	\$1,324,845	\$1,926,713
Secondary Impact		\$2,881,147	14.8	\$972,002	\$1,613,864
Total Impact	\$3,305,033	\$6,186,181	13.1	\$2,296,846	\$3,540,579
US		\$0	0.0	\$0	\$0
Direct Impact		\$5,199,684	9.6	\$1,532,040	\$2,490,207
Secondary Impact		\$8,035,260	9.8	\$2,435,016	\$4,229,434
Total Impact	\$5,199,684	\$13,234,943	13.1	\$3,967,055	\$6,719,641

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¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alternative 1 Change From No-action Alternative.					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$12,727	0.0	\$1,531	\$1,981
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$3,388	0.1	\$923	\$924
391	All other miscellaneous manufacturing	\$5,697	0.0	\$1,662	\$1,670
396	Wholesale - Other durable goods merchant wholesalers	\$151,686	0.7	\$44,237	\$71,284
398	Wholesale - Grocery and related product wholesalers	\$94,730	0.6	\$32,748	\$45,190
399	Wholesale - Petroleum and petroleum products	\$350,037	0.2	\$21,606	\$303,439
406	Retail - Food and beverage stores	\$345,305	4.2	\$166,695	\$202,345
408	Retail - Gasoline stores	\$368,310	3.1	\$140,833	\$180,293
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$77,950	1.3	\$39,134	\$43,722
412	Retail - Miscellaneous store retailers	\$116,269	2.3	\$67,976	\$66,161
417	Truck transportation	\$36,555	0.2	\$15,894	\$18,652
504	Other amusement and recreation industries	\$294,283	4.3	\$122,054	\$163,020
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0

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508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$758,844	8.5	\$321,320	\$437,361
512	Automotive repair and maintenance, except car washes	\$371,805	3.1	\$238,808	\$245,110
	Direct Impact	\$2,987,578	28.5	\$1,215,422	\$1,781,151
	Secondary Impact	\$2,148,397	12.2	\$711,144	\$1,193,068
	Total Impact	\$5,135,975	40.5	\$1,926,566	\$2,974,218

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alternative 1 Change From No-action Alternative.					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$203,205	0.5	\$28,328	\$36,690
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$25,143	0.0	\$6,939	\$6,929
391	All other miscellaneous manufacturing	\$44,621	0.5	\$15,014	\$14,895
396	Wholesale - Other durable goods merchant wholesalers	\$182,384	0.8	\$60,084	\$95,613
398	Wholesale - Grocery and related product wholesalers	\$109,884	0.6	\$40,247	\$55,544
399	Wholesale - Petroleum and petroleum products	\$365,405	0.2	\$23,844	\$317,357
406	Retail - Food and beverage stores	\$345,305	4.2	\$172,767	\$208,568
408	Retail - Gasoline stores	\$368,310	3.1	\$146,126	\$185,231
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$77,950	1.3	\$40,722	\$45,272

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412	Retail - Miscellaneous store retailers	\$116,269	2.3	\$70,059	\$68,246
417	Truck transportation	\$41,625	0.2	\$18,195	\$21,213
504	Other amusement and recreation industries	\$294,283	4.4	\$134,758	\$173,494
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$758,844	8.5	\$327,270	\$450,955
512	Automotive repair and maintenance, except car washes	\$371,805	3.1	\$240,493	\$246,703
	Direct Impact	\$3,305,033	29.7	\$1,324,845	\$1,926,713
	Secondary Impact	\$2,881,147	14.8	\$972,002	\$1,613,864
	Total Impact	\$6,186,181	44.7	\$2,296,846	\$3,540,579

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alternative 1 Change From No-action Alternative.					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$690,584	2.0	\$113,357	\$151,248
154	Petroleum refineries	\$1,151,037	0.1	\$30,707	\$258,941
382	Sporting and athletic goods manufacturing	\$131,630	0.6	\$36,327	\$45,128
391	All other miscellaneous manufacturing	\$106,822	0.8	\$38,412	\$44,373
396	Wholesale - Other durable goods merchant wholesalers	\$228,250	1.0	\$75,193	\$122,831
398	Wholesale - Grocery and related product wholesalers	\$123,323	0.7	\$45,298	\$64,786

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399	Wholesale - Petroleum and petroleum products	\$388,773	0.3	\$25,771	\$344,984
406	Retail - Food and beverage stores	\$345,305	4.2	\$172,767	\$215,720
408	Retail - Gasoline stores	\$368,310	3.1	\$146,126	\$212,286
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$77,950	1.3	\$40,722	\$49,570
412	Retail - Miscellaneous store retailers	\$116,269	2.3	\$70,059	\$73,647
417	Truck transportation	\$46,500	0.4	\$20,309	\$23,680
504	Other amusement and recreation industries	\$294,283	4.4	\$149,230	\$177,126
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$758,844	8.5	\$327,270	\$450,955
512	Automotive repair and maintenance, except car washes	\$371,805	3.1	\$240,493	\$254,927
	Direct Impact	\$5,199,684	32.5	\$1,532,040	\$2,490,207
	Secondary Impact	\$8,035,260	33.4	\$2,435,016	\$4,229,434
	Total Impact	\$13,234,943	65.9	\$3,967,055	\$6,719,641

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Table 5-3. Average Annual Regional Economic Tables, Alternative 2A

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level – Alternative 2A.					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵

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Local		\$200,776,193	523.8	\$82,665,400	\$119,570,020
Direct Impact		\$143,209,087	808.3	\$47,180,198	\$79,237,175
Secondary Impact	\$200,776,193	\$343,985,281	693.8	\$129,845,598	\$198,807,195
Total Impact					
State		\$225,076,792	566.7	\$90,548,694	\$131,134,671
Direct Impact		\$196,407,695	1018.9	\$66,252,900	\$110,021,903
Secondary Impact	\$225,076,792	\$421,484,488	844.4	\$156,801,592	\$241,156,574
Total Impact					
US		\$354,803,358	619.4	\$104,649,875	\$170,013,018
Direct Impact		\$547,767,809	632.0	\$165,988,990	\$288,359,763
Secondary Impact	\$354,803,358	\$902,571,167	298.2	270638864.9	458372780.6
Total Impact		\$200,776,193	523.8	\$82,665,400	\$119,570,020

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2a					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$659,617	1.9	\$63,916	\$82,877
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$229,122	0.9	\$61,521	\$61,509
391	All other miscellaneous manufacturing	\$461,852	3.0	\$139,421	\$139,929
396	Wholesale - Other durable goods merchant wholesalers	\$9,412,891	39.4	\$2,837,395	\$4,546,867

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398	Wholesale - Grocery and related product wholesalers	\$5,904,935	30.8	\$2,027,530	\$2,795,758
399	Wholesale - Petroleum and petroleum products	\$22,250,409	15.5	\$1,419,227	\$19,308,295
406	Retail - Food and beverage stores	\$23,382,844	279.8	\$11,381,331	\$13,755,272
408	Retail - Gasoline stores	\$25,226,887	210.2	\$9,748,609	\$12,374,841
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,311,240	87.1	\$2,709,009	\$3,015,971
412	Retail - Miscellaneous store retailers	\$7,896,966	148.7	\$4,680,074	\$4,565,914
417	Truck transportation	\$2,569,578	12.5	\$1,122,355	\$1,316,745
504	Other amusement and recreation industries	\$20,035,983	307.9	\$8,034,315	\$10,881,006
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,505,653	580.3	\$21,736,360	\$29,583,084
512	Automotive repair and maintenance, except car washes	\$25,928,216	216.4	\$16,704,338	\$17,141,950
	Direct Impact	\$200,776,193	1934.3	\$82,665,400	\$119,570,020
	Secondary Impact	\$143,209,087	808.3	\$47,180,198	\$79,237,175
	Total Impact	\$343,985,281	2742.6	\$129,845,598	\$198,807,195

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2a

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IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$13,760,477	40.3	\$1,836,026	\$2,381,400
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$1,713,159	7.0	\$462,700	\$462,647
391	All other miscellaneous manufacturing	\$3,030,723	21.1	\$1,010,423	\$1,004,403
396	Wholesale - Other durable goods merchant wholesalers	\$12,421,673	52.1	\$4,092,091	\$6,511,934
398	Wholesale - Grocery and related product wholesalers	\$7,440,982	38.6	\$2,725,442	\$3,761,241
399	Wholesale - Petroleum and petroleum products	\$24,547,705	17.4	\$1,605,648	\$21,321,497
406	Retail - Food and beverage stores	\$23,382,844	279.8	\$11,727,909	\$14,123,496
408	Retail - Gasoline stores	\$25,226,887	213.4	\$10,118,072	\$12,719,575
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,311,240	87.1	\$2,780,701	\$3,084,693
412	Retail - Miscellaneous store retailers	\$7,896,966	152.6	\$4,795,827	\$4,683,347
417	Truck transportation	\$2,874,286	14.5	\$1,260,509	\$1,469,486
504	Other amusement and recreation industries	\$20,035,983	308.5	\$9,129,916	\$11,779,920
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,505,653	580.3	\$22,217,029	\$30,608,135
512	Automotive repair and maintenance, except car washes	\$25,928,216	217.3	\$16,786,399	\$17,222,894

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	Direct Impact	\$225,076,792	2029.8	\$90,548,694	\$131,134,671
	Secondary Impact	\$196,407,695	1018.9	\$66,252,900	\$110,021,903
	Total Impact	\$421,484,488	3048.7	\$156,801,592	\$241,156,574

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2a					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$46,764,042	136.8	\$7,607,135	\$10,218,537
154	Petroleum refineries	\$78,838,493	7.8	\$2,103,266	\$17,735,709
382	Sporting and athletic goods manufacturing	\$8,968,774	36.7	\$2,423,408	\$3,074,873
391	All other miscellaneous manufacturing	\$7,255,389	50.4	\$2,590,830	\$3,013,877
396	Wholesale - Other durable goods merchant wholesalers	\$15,545,514	65.2	\$5,121,184	\$8,365,753
398	Wholesale - Grocery and related product wholesalers	\$8,351,016	43.3	\$3,067,425	\$4,387,143
399	Wholesale - Petroleum and petroleum products	\$26,628,383	18.8	\$1,765,427	\$23,629,154
406	Retail - Food and beverage stores	\$23,382,844	279.8	\$11,727,909	\$14,607,815
408	Retail - Gasoline stores	\$25,226,887	213.4	\$10,118,072	\$14,540,151
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,311,240	87.1	\$2,780,701	\$3,377,622

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412	Retail - Miscellaneous store retailers	\$7,896,966	152.6	\$4,795,827	\$5,002,089
417	Truck transportation	\$3,163,960	16.9	\$1,385,076	\$1,614,847
504	Other amusement and recreation industries	\$20,035,983	308.5	\$10,160,183	\$12,059,569
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,505,653	580.3	\$22,217,029	\$30,608,135
512	Automotive repair and maintenance, except car washes	\$25,928,216	217.3	\$16,786,399	\$17,777,744
	Direct Impact	\$354,803,358	2214.8	\$104,649,875	\$170,013,018
	Secondary Impact	\$547,767,809	2283.2	\$165,988,990	\$288,359,763
	Total Impact	\$902,571,167	4498.0	\$270,638,865	\$458,372,781

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2a Change From NAA					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		\$1,742,885	-4.0	\$693,790	\$1,053,249
Secondary Impact		\$1,374,151	7.7	\$462,742	\$775,821
Total Impact	\$1,742,885	\$3,117,036	-5.2	\$1,156,531	\$1,829,070
State					
Direct Impact		\$1,861,034	-4.2	\$734,462	\$1,088,792
Secondary Impact		\$1,602,603	8.3	\$540,772	\$898,006
Total Impact	\$1,861,034	\$3,463,638	-6.3	\$1,275,233	\$1,986,798
US					
Direct Impact		\$2,889,933	-4.6	\$846,102	\$1,387,479

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Secondary Impact		\$4,445,757	-4.7	\$1,346,967	\$2,341,495
Total Impact	\$2,889,933	\$7,335,690	-2.1	\$2,193,069	\$3,728,974

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2a Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$5,580	\$0	\$410	\$535
154	Petroleum refineries	\$0	\$0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$2,581	\$0	\$697	\$696
391	All other miscellaneous manufacturing	\$1,005	\$0	-\$115	-\$81
396	Wholesale - Other durable goods merchant wholesalers	\$98,757	\$0	\$31,049	\$49,516
398	Wholesale - Grocery and related product wholesalers	\$66,735	\$0	\$22,623	\$31,198
399	Wholesale - Petroleum and petroleum products	\$249,257	\$0	\$17,068	\$216,832
406	Retail - Food and beverage stores	\$185,005	\$2	\$87,873	\$107,978
408	Retail - Gasoline stores	\$208,366	\$2	\$74,235	\$96,966
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$43,026	\$1	\$21,747	\$24,441
412	Retail - Miscellaneous store retailers	\$63,206	\$1	\$36,005	\$34,777
417	Truck transportation	\$18,190	\$0	\$7,437	\$8,816

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504	Other amusement and recreation industries	\$161,840	\$2	\$66,334	\$88,965
507	Hotels and motels, including casino hotels	\$0	\$0	\$0	\$0
508	Other accommodations	\$0	\$0	\$0	\$0
509	Full-service restaurants	\$411,174	\$4	\$181,853	\$242,369
512	Automotive repair and maintenance, except car washes	\$228,169	\$2	\$146,577	\$150,242
	Direct Impact	\$1,742,885	\$16	\$693,790	\$1,053,249
	Secondary Impact	\$1,374,151	\$8	\$462,742	\$775,821
	Total Impact	\$3,117,036	\$24	\$1,156,531	\$1,829,070

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2a Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$108,872	0.3	\$13,965	\$18,136
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$13,878	0.0	\$3,733	\$3,718
391	All other miscellaneous manufacturing	\$24,256	0.3	\$7,232	\$7,246
396	Wholesale - Other durable goods merchant wholesalers	\$100,464	0.5	\$33,096	\$52,667
398	Wholesale - Grocery and related product wholesalers	\$58,873	0.3	\$21,563	\$29,759
399	Wholesale - Petroleum and petroleum products	\$231,925	0.1	\$15,644	\$201,635

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406	Retail - Food and beverage stores	\$185,005	2.3	\$92,006	\$111,745
408	Retail - Gasoline stores	\$208,366	1.7	\$79,452	\$101,834
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$43,026	0.7	\$22,356	\$24,990
412	Retail - Miscellaneous store retailers	\$63,206	1.3	\$37,342	\$36,150
417	Truck transportation	\$21,981	0.1	\$9,157	\$10,703
504	Other amusement and recreation industries	\$161,840	2.5	\$73,410	\$94,910
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$411,174	4.4	\$178,281	\$244,347
512	Automotive repair and maintenance, except car washes	\$228,169	1.9	\$147,222	\$150,948
	Direct Impact	\$1,861,034	16.5	\$734,462	\$1,088,792
	Secondary Impact	\$1,602,603	8.3	\$540,772	\$898,006
	Total Impact	\$3,463,638	24.7	\$1,275,233	\$1,986,798

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2a Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$369,996	\$1	\$59,716	\$80,688
154	Petroleum refineries	\$651,185	\$0	\$17,372	\$146,493
382	Sporting and athletic goods manufacturing	\$72,656	\$0	\$19,529	\$24,909

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391	All other miscellaneous manufacturing	\$58,071	\$0	\$19,729	\$24,122
396	Wholesale - Other durable goods merchant wholesalers	\$125,728	\$1	\$41,421	\$67,660
398	Wholesale - Grocery and related product wholesalers	\$66,073	\$0	\$24,270	\$34,710
399	Wholesale - Petroleum and petroleum products	\$219,944	\$0	\$14,683	\$195,170
406	Retail - Food and beverage stores	\$185,005	\$2	\$92,006	\$115,577
408	Retail - Gasoline stores	\$208,366	\$2	\$79,452	\$120,098
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$43,026	\$1	\$22,356	\$27,361
412	Retail - Miscellaneous store retailers	\$63,206	\$1	\$37,342	\$40,037
417	Truck transportation	\$25,495	\$0	\$10,653	\$12,451
504	Other amusement and recreation industries	\$161,840	\$2	\$82,068	\$97,411
507	Hotels and motels, including casino hotels	\$0	\$0	\$0	\$0
508	Other accommodations	\$0	\$0	\$0	\$0
509	Full-service restaurants	\$411,174	\$4	\$178,281	\$244,347
512	Automotive repair and maintenance, except car washes	\$228,169	\$2	\$147,222	\$156,443
	Direct Impact	\$2,889,933	\$18	\$846,102	\$1,387,479
	Secondary Impact	\$4,445,757	\$18	\$1,346,967	\$2,341,495
	Total Impact	\$7,335,690	\$36	\$2,193,069	\$3,728,974

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

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Table 5-4. Average Annual Regional Economic Tables, Alternative 2B

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local		\$199,210,864	524.4	\$82,034,117	\$118,629,700
Direct Impact		\$142,020,743	801.6	\$46,783,234	\$78,571,237
Secondary Impact	\$199,210,864.13	\$341,231,608	694.5	\$128,817,351	\$197,200,938
Total Impact		\$0	0.0	\$0	\$0
State		\$223,372,091	567.3	\$89,871,002	\$130,139,447
Direct Impact		\$194,931,409	1011.3	\$65,754,807	\$109,194,801
Secondary Impact	\$223,372,090.86	\$418,303,501	845.3	\$155,625,808	\$239,334,248
Total Impact		\$0	0.0	\$0	\$0
US		\$352,139,902	620.1	\$103,867,898	\$168,735,665
Direct Impact		\$543,662,764	632.7	\$164,745,144	\$286,198,262
Secondary Impact	\$352,139,901.64	\$895,802,666	298.5	\$268,613,040	\$454,933,927
Total Impact		\$199,210,864	524.4	\$82,034,117	\$118,629,700

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				x
103	All other food manufacturing	\$654,602.39	1.9	\$63,509.61	\$82,348.28
154	Petroleum refineries	\$0.00	0.0	\$0.00	\$0.00

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382	Sporting and athletic goods manufacturing	\$227,010.11	0.9	\$60,951.76	\$60,940.40
391	All other miscellaneous manufacturing	\$459,884.98	3.0	\$139,057.48	\$139,546.13
396	Wholesale - Other durable goods merchant wholesalers	\$9,330,158.40	39.0	\$2,811,741.49	\$4,505,891.34
398	Wholesale - Grocery and related product wholesalers	\$5,850,241.18	30.6	\$2,008,917.50	\$2,770,092.43
399	Wholesale - Petroleum and petroleum products	\$22,046,642.02	15.4	\$1,405,604.64	\$19,131,186.04
406	Retail - Food and beverage stores	\$23,209,701.02	277.8	\$11,298,233.69	\$13,653,875.36
408	Retail - Gasoline stores	\$25,036,247.16	208.6	\$9,678,350.42	\$12,284,163.91
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,271,472.66	86.5	\$2,688,830.36	\$2,993,380.82
412	Retail - Miscellaneous store retailers	\$7,838,173.16	147.5	\$4,646,019.88	\$4,532,881.79
417	Truck transportation	\$2,551,758.74	12.4	\$1,114,850.07	\$1,307,890.34
504	Other amusement and recreation industries	\$19,886,170.43	305.6	\$7,973,489.05	\$10,799,087.04
507	Hotels and motels, including casino hotels	\$0.00	0.0	\$0.00	\$0.00
508	Other accommodations	\$0.00	0.0	\$0.00	\$0.00
509	Full-service restaurants	\$51,122,665.23	576.0	\$21,570,139.09	\$29,359,698.95
512	Automotive repair and maintenance, except car washes	\$25,726,139.50	214.6	\$16,574,423.36	\$17,008,717.56
	Direct Impact	\$199,210,864.13	1919.7	\$82,034,117.43	\$118,629,700.39
	Secondary Impact	\$142,020,743.38	801.6	\$46,783,233.76	\$78,571,236.74
	Total Impact	\$341,231,607.51	2721.3	\$128,817,351.19	\$197,200,938.07

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

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State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$13,658,584.79	40.1	\$1,822,773.29	\$2,364,194.97
154	Petroleum refineries	\$0.00	0.0	\$0.00	\$0.00
382	Sporting and athletic goods manufacturing	\$1,700,331.87	7.0	\$459,244.81	\$459,200.30
391	All other miscellaneous manufacturing	\$3,008,159.71	20.9	\$1,003,374.91	\$997,365.25
396	Wholesale - Other durable goods merchant wholesalers	\$12,328,737.31	51.7	\$4,061,474.66	\$6,463,213.45
398	Wholesale - Grocery and related product wholesalers	\$7,385,885.02	38.3	\$2,705,260.81	\$3,733,390.30
399	Wholesale - Petroleum and petroleum products	\$24,346,366.18	17.2	\$1,592,222.35	\$21,146,515.68
406	Retail - Food and beverage stores	\$23,209,701.02	277.8	\$11,641,494.68	\$14,018,916.39
408	Retail - Gasoline stores	\$25,036,247.16	211.8	\$10,043,850.75	\$12,625,201.34
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,271,472.66	86.5	\$2,759,972.79	\$3,061,596.07
412	Retail - Miscellaneous store retailers	\$7,838,173.16	151.4	\$4,760,690.22	\$4,649,206.54
417	Truck transportation	\$2,853,461.57	14.4	\$1,251,641.38	\$1,459,132.87
504	Other amusement and recreation industries	\$19,886,170.43	306.2	\$9,061,841.11	\$11,691,976.40
507	Hotels and motels, including casino hotels	\$0.00	0.0	\$0.00	\$0.00
508	Other accommodations	\$0.00	0.0	\$0.00	\$0.00
509	Full-service restaurants	\$51,122,665.23	576.0	\$22,051,316.42	\$30,380,537.49
512	Automotive repair and maintenance, except car washes	\$25,726,139.50	215.5	\$16,655,842.63	\$17,088,999.48

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	Direct Impact	\$223,372,090.86	2014.7	\$89,871,001.73	\$130,139,447.47
	Secondary Impact	\$194,931,409.01	1011.3	\$65,754,806.74	\$109,194,800.94
	Total Impact	\$418,303,500.81	3025.9	\$155,625,807.52	\$239,334,248.41

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$46,417,768.47	135.8	\$7,551,093.90	\$10,142,968.50
154	Petroleum refineries	\$78,242,707.29	7.7	\$2,087,371.72	\$17,601,679.71
382	Sporting and athletic goods manufacturing	\$8,901,621.02	36.4	\$2,405,324.13	\$3,051,849.55
391	All other miscellaneous manufacturing	\$7,201,372.48	50.0	\$2,572,103.14	\$2,991,438.53
396	Wholesale - Other durable goods merchant wholesalers	\$15,429,206.79	64.8	\$5,082,869.09	\$8,303,163.42
398	Wholesale - Grocery and related product wholesalers	\$8,289,179.07	43.0	\$3,044,712.01	\$4,354,657.34
399	Wholesale - Petroleum and petroleum products	\$26,427,150.57	18.7	\$1,752,031.44	\$23,450,587.52
406	Retail - Food and beverage stores	\$23,209,701.02	277.8	\$11,641,494.68	\$14,499,648.63
408	Retail - Gasoline stores	\$25,036,247.16	211.8	\$10,043,850.75	\$14,430,271.41
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,271,472.66	86.5	\$2,759,972.79	\$3,352,332.65
412	Retail - Miscellaneous store retailers	\$7,838,173.16	151.4	\$4,760,690.22	\$4,964,848.26
417	Truck transportation	\$3,140,329.65	16.9	\$1,375,009.91	\$1,603,093.91

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504	Other amusement and recreation industries	\$19,886,170.43	306.2	\$10,084,212.84	\$11,969,397.21
507	Hotels and motels, including casino hotels	\$0.00	0.0	\$0.00	\$0.00
508	Other accommodations	\$0.00	0.0	\$0.00	\$0.00
509	Full-service restaurants	\$51,122,665.23	576.0	\$22,051,316.42	\$30,380,537.49
512	Automotive repair and maintenance, except car washes	\$25,726,139.50	215.5	\$16,655,842.63	\$17,639,189.44
	Direct Impact	\$352,139,901.64	2198.3	\$103,867,897.53	\$168,735,664.52
	Secondary Impact	\$543,662,764.08	2266.1	\$164,745,143.84	\$286,198,262.22
	Total Impact	\$895,802,665.72	4464.3	\$268,613,040.42	\$454,933,926.74

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² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b Change From NAA					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		-\$32,839	-0.5	-\$24,144	-\$12,353
Secondary Impact		\$35,876	0.3	\$16,394	\$26,943
Total Impact	-\$32,839	\$3,037	-0.1	-\$7,750	\$14,591
State					
Direct Impact		-\$79,625	-0.6	-\$38,171	-\$43,901
Secondary Impact		-\$79,609	-0.5	-\$26,784	-\$44,449
Total Impact	-\$79,625	-\$159,231	-1.0	-\$64,956	-\$88,350
US					
Direct Impact		-\$145,525	-1.0	-\$45,604	-\$68,125
Secondary Impact		-\$233,624	-1.2	-\$70,920	-\$122,351
Total Impact	-\$145,525	-\$379,149	-2.2	-\$116,525	-\$190,476

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

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² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$126	0.0	-\$63	-\$80
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$229	0.0	\$63	\$63
391	All other miscellaneous manufacturing	-\$1,450	0.0	-\$626	-\$613
396	Wholesale - Other durable goods merchant wholesalers	\$6,178	0.1	\$2,429	\$3,787
398	Wholesale - Grocery and related product wholesalers	\$5,870	0.1	\$1,891	\$2,610
399	Wholesale - Petroleum and petroleum products	\$22,233	0.1	\$1,963	\$19,541
406	Retail - Food and beverage stores	-\$12,659	-0.1	-\$7,162	-\$7,845
408	Retail - Gasoline stores	-\$8,721	0.0	-\$6,251	-\$6,690
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$2,311	-0.1	-\$1,273	-\$1,312
412	Retail - Miscellaneous store retailers	-\$3,868	0.0	-\$2,958	-\$3,046
417	Truck transportation	-\$2,327	-0.1	-\$1,247	-\$1,421
504	Other amusement and recreation industries	-\$8,981	-0.3	-\$2,915	-\$4,363
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$25,825	-0.5	-\$7,153	-\$12,032

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512	Automotive repair and maintenance, except car washes	-\$1,075	-0.1	-\$841	-\$953
	Direct Impact	-\$32,839	-0.8	-\$24,144	-\$12,353
	Secondary Impact	\$35,876	0.2	\$16,394	\$26,943
	Total Impact	\$3,037	-0.6	-\$7,750	\$14,591

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$7,451	0.0	-\$1,214	-\$1,567
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	-\$745	0.0	-\$207	-\$214
391	All other miscellaneous manufacturing	-\$1,485	0.1	-\$876	-\$846
396	Wholesale - Other durable goods merchant wholesalers	-\$5,496	0.1	-\$1,812	-\$2,882
398	Wholesale - Grocery and related product wholesalers	-\$4,028	-0.1	-\$1,476	-\$2,036
399	Wholesale - Petroleum and petroleum products	\$4,883	-0.1	\$538	\$4,329
406	Retail - Food and beverage stores	-\$12,659	-0.1	-\$6,709	-\$7,646
408	Retail - Gasoline stores	-\$8,721	-0.1	-\$5,381	-\$5,878
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$2,311	-0.1	-\$1,288	-\$1,342
412	Retail - Miscellaneous store retailers	-\$3,868	0.0	-\$2,825	-\$2,903
417	Truck transportation	-\$1,858	0.0	-\$1,033	-\$1,192

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504	Other amusement and recreation industries	-\$8,981	-0.2	-\$4,239	-\$5,386
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$25,825	-0.5	-\$10,729	-\$15,347
512	Automotive repair and maintenance, except car washes	-\$1,075	-0.1	-\$923	-\$993
	Direct Impact	-\$79,625	-0.8	-\$38,171	-\$43,901
	Secondary Impact	-\$79,609	-0.4	-\$26,784	-\$44,449
	Total Impact	-\$159,231	-1.3	-\$64,956	-\$88,350

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 2b Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$25,320	-0.1	-\$4,303	-\$5,597
154	Petroleum refineries	-\$27,251	0.0	-\$727	-\$6,130
382	Sporting and athletic goods manufacturing	-\$3,902	0.0	-\$1,096	-\$1,338
391	All other miscellaneous manufacturing	-\$3,553	0.0	-\$1,716	-\$1,476
396	Wholesale - Other durable goods merchant wholesalers	-\$6,879	0.1	-\$2,264	-\$3,702
398	Wholesale - Grocery and related product wholesalers	-\$4,521	0.0	-\$1,660	-\$2,377
399	Wholesale - Petroleum and petroleum products	-\$9,204	-0.1	-\$563	-\$8,168
406	Retail - Food and beverage stores	-\$12,659	-0.1	-\$6,709	-\$7,909
408	Retail - Gasoline stores	-\$8,721	-0.1	-\$5,381	-\$5,025

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410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$2,311	-0.1	-\$1,288	-\$1,470
412	Retail - Miscellaneous store retailers	-\$3,868	0.0	-\$2,825	-\$2,449
417	Truck transportation	-\$1,454	0.1	-\$867	-\$995
504	Other amusement and recreation industries	-\$8,981	-0.2	-\$4,555	-\$5,406
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$25,825	-0.5	-\$10,729	-\$15,347
512	Automotive repair and maintenance, except car washes	-\$1,075	-0.1	-\$923	-\$739
	Direct Impact	-\$145,525	-1.0	-\$45,604	-\$68,125
	Secondary Impact	-\$233,624	-1.0	-\$70,920	-\$122,351
	Total Impact	-\$379,149	-2.1	-\$116,525	-\$190,476

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Table 5-5. Average Annual Regional Economic Tables, Alternative 3A

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		\$192,704,267	486.5	\$79,440,053	\$114,764,929
Secondary Impact		\$137,486,261	776.1	\$45,279,027	\$76,053,485
Total Impact	\$192,704,267	\$330,190,527	641.9	\$124,719,079	\$190,818,414
State		\$0	0.0	\$0	\$0

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Direct Impact		\$216,297,443	527.8	\$87,037,627	\$126,013,183
Secondary Impact		\$188,745,523	979.2	\$63,667,499	\$105,730,654
Total Impact	\$216,297,443	\$405,042,967	786.3	\$150,705,125	\$231,743,837
US		\$0	0.0	\$0	\$0
Direct Impact		\$340,995,179	577.1	\$100,581,961	\$163,409,680
Secondary Impact		\$526,371,513	588.0	\$159,504,223	\$277,101,733
Total Impact	\$340,995,179	\$867,366,692	200.8	\$260,086,184	\$440,511,412

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$607,248	1.7	\$55,999	\$72,670
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$220,972	0.9	\$59,212	\$59,207
391	All other miscellaneous manufacturing	\$449,503	2.9	\$135,598	\$136,128
396	Wholesale - Other durable goods merchant wholesalers	\$8,955,111	37.3	\$2,714,663	\$4,346,268
398	Wholesale - Grocery and related product wholesalers	\$5,630,819	29.5	\$1,931,020	\$2,662,383
399	Wholesale - Petroleum and petroleum products	\$21,259,699	14.8	\$1,364,339	\$18,452,221
406	Retail - Food and beverage stores	\$22,445,969	268.4	\$10,934,353	\$13,209,853

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408	Retail - Gasoline stores	\$24,259,352	202.2	\$9,379,438	\$11,896,178
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,103,378	83.5	\$2,608,354	\$2,902,842
412	Retail - Miscellaneous store retailers	\$7,584,134	142.5	\$4,500,876	\$4,391,983
417	Truck transportation	\$2,475,711	12.2	\$1,081,269	\$1,268,636
504	Other amusement and recreation industries	\$19,249,541	296.7	\$7,684,569	\$10,426,620
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$49,460,031	557.4	\$20,875,608	\$28,403,704
512	Automotive repair and maintenance, except car washes	\$25,002,795	208.5	\$16,114,756	\$16,536,237
	Direct Impact	\$192,704,267	1858.3	\$79,440,053	\$114,764,929
	Secondary Impact	\$137,486,261	776.1	\$45,279,027	\$76,053,485
	Total Impact	\$330,190,527	2634.4	\$124,719,079	\$190,818,414

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$13,209,139	38.7	\$1,750,877	\$2,271,452
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$1,646,112	6.7	\$443,243	\$443,245

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391	All other miscellaneous manufacturing	\$2,910,664	20.2	\$967,918	\$962,500
396	Wholesale - Other durable goods merchant wholesalers	\$11,934,736	50.0	\$3,931,679	\$6,256,663
398	Wholesale - Grocery and related product wholesalers	\$7,142,846	37.1	\$2,616,242	\$3,610,540
399	Wholesale - Petroleum and petroleum products	\$23,583,708	16.7	\$1,543,799	\$20,484,681
406	Retail - Food and beverage stores	\$22,445,969	268.4	\$11,260,618	\$13,557,613
408	Retail - Gasoline stores	\$24,259,352	205.4	\$9,738,770	\$12,231,460
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,103,378	83.5	\$2,672,427	\$2,963,970
412	Retail - Miscellaneous store retailers	\$7,584,134	146.4	\$4,609,265	\$4,502,197
417	Truck transportation	\$2,765,037	14.0	\$1,212,437	\$1,413,471
504	Other amusement and recreation industries	\$19,249,541	297.1	\$8,765,116	\$11,312,931
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$49,460,031	557.4	\$21,336,513	\$29,392,487
512	Automotive repair and maintenance, except car washes	\$25,002,795	209.5	\$16,188,719	\$16,609,972
	Direct Impact	\$216,297,443	1950.8	\$87,037,627	\$126,013,183
	Secondary Impact	\$188,745,523	979.2	\$63,667,499	\$105,730,654
	Total Impact	\$405,042,967	2930.0	\$150,705,125	\$231,743,837

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a

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IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$44,890,359	131.6	\$7,292,619	\$9,805,803
154	Petroleum refineries	\$75,814,773	7.4	\$2,022,600	\$17,055,485
382	Sporting and athletic goods manufacturing	\$8,617,770	35.2	\$2,321,562	\$2,954,533
391	All other miscellaneous manufacturing	\$6,967,973	48.4	\$2,484,354	\$2,894,484
396	Wholesale - Other durable goods merchant wholesalers	\$14,936,122	62.5	\$4,920,431	\$8,037,811
398	Wholesale - Grocery and related product wholesalers	\$8,016,418	41.5	\$2,944,523	\$4,211,366
399	Wholesale - Petroleum and petroleum products	\$25,607,095	18.1	\$1,697,907	\$22,722,896
406	Retail - Food and beverage stores	\$22,445,969	268.4	\$11,260,618	\$14,022,527
408	Retail - Gasoline stores	\$24,259,352	205.4	\$9,738,770	\$13,982,487
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,103,378	83.5	\$2,672,427	\$3,245,434
412	Retail - Miscellaneous store retailers	\$7,584,134	146.4	\$4,609,265	\$4,803,935
417	Truck transportation	\$3,039,469	16.3	\$1,330,272	\$1,550,986
504	Other amusement and recreation industries	\$19,249,541	297.1	\$9,761,381	\$11,586,213
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$49,460,031	557.4	\$21,336,513	\$29,392,487
512	Automotive repair and maintenance, except car washes	\$25,002,795	209.5	\$16,188,719	\$17,143,227
	Direct Impact	\$340,995,179	2128.7	\$100,581,961	\$163,409,680
	Secondary Impact	\$526,371,513	2193.8	\$159,504,223	\$277,101,733
	Total Impact	\$867,366,692	4322.6	\$260,086,184	\$440,511,412

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³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a Change From NAA					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		-\$8,643,383	-47.4	-\$3,484,715	-\$5,129,944
Secondary Impact		-\$5,997,918	-33.8	-\$1,981,655	-\$3,320,210
Total Impact	-\$8,643,383	-\$14,641,302	-65.3	-\$5,466,372	-\$8,450,154
State					
Direct Impact		-\$9,513,847	-49.7	-\$3,820,956	-\$5,544,858
Secondary Impact		-\$8,324,745	-43.2	-\$2,808,723	-\$4,662,126
Total Impact	-\$9,513,847	-\$17,838,590	-74.4	-\$6,629,680	-\$10,206,984
US					
Direct Impact		-\$15,010,264	-54.3	-\$4,428,831	-\$7,176,621
Secondary Impact		-\$23,268,237	-56.2	-\$7,052,243	-\$12,242,329
Total Impact	-\$15,010,264	-\$38,278,500	-103.0	-\$11,481,074	-\$19,418,950

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				

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103	All other food manufacturing	-\$54,394	-0.2	-\$8,246	-\$10,629
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	-\$8,203	0.0	-\$2,319	-\$2,313
391	All other miscellaneous manufacturing	-\$16,703	-0.2	-\$5,560	-\$5,510
396	Wholesale - Other durable goods merchant wholesalers	-\$467,327	-2.0	-\$124,315	-\$203,377
398	Wholesale - Grocery and related product wholesalers	-\$275,268	-1.3	-\$97,200	-\$134,324
399	Wholesale - Petroleum and petroleum products	-\$997,280	-0.7	-\$54,124	-\$861,236
406	Retail - Food and beverage stores	-\$1,021,612	-12.3	-\$490,424	-\$596,131
408	Retail - Gasoline stores	-\$1,050,083	-8.6	-\$407,429	-\$524,463
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$226,095	-3.9	-\$110,155	-\$123,473
412	Retail - Miscellaneous store retailers	-\$340,716	-6.6	-\$197,194	-\$191,842
417	Truck transportation	-\$105,345	-0.5	-\$46,614	-\$54,502
504	Other amusement and recreation industries	-\$855,697	-12.4	-\$376,063	-\$490,910
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$2,228,570	-25.2	-\$929,533	-\$1,278,182
512	Automotive repair and maintenance, except car washes	-\$996,090	-8.4	-\$635,538	-\$653,050
	Direct Impact	-\$8,643,383	-82.4	-\$3,484,715	-\$5,129,944
	Secondary Impact	-\$5,997,918	-33.8	-\$1,981,655	-\$3,320,210
	Total Impact	-\$14,641,302	-116.2	-\$5,466,372	-\$8,450,154

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

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State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$601,206	-1.8	-\$92,371	-\$119,292
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	-\$72,928	-0.4	-\$21,061	-\$21,021
391	All other miscellaneous manufacturing	-\$130,762	-0.9	-\$46,937	-\$46,252
396	Wholesale - Other durable goods merchant wholesalers	-\$529,743	-2.3	-\$174,514	-\$277,712
398	Wholesale - Grocery and related product wholesalers	-\$325,102	-1.6	-\$119,078	-\$164,331
399	Wholesale - Petroleum and petroleum products	-\$1,014,813	-0.9	-\$64,693	-\$880,761
406	Retail - Food and beverage stores	-\$1,021,612	-12.3	-\$510,586	-\$617,065
408	Retail - Gasoline stores	-\$1,050,083	-8.8	-\$416,578	-\$532,999
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$226,095	-3.9	-\$117,991	-\$131,312
412	Retail - Miscellaneous store retailers	-\$340,716	-6.6	-\$204,551	-\$199,037
417	Truck transportation	-\$120,434	-0.6	-\$53,466	-\$62,275
504	Other amusement and recreation industries	-\$855,697	-12.5	-\$396,699	-\$507,952
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$2,228,570	-25.2	-\$958,500	-\$1,324,367
512	Automotive repair and maintenance, except car washes	-\$996,090	-8.4	-\$643,937	-\$660,485
	Direct Impact	-\$9,513,847	-85.9	-\$3,820,956	-\$5,544,858
	Secondary Impact	-\$8,324,745	-43.2	-\$2,808,723	-\$4,662,126
	Total Impact	-\$17,838,590	-129.1	-\$6,629,680	-\$10,206,984

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

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³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3a Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$2,043,153	-5.7	-\$342,560	-\$449,928
154	Petroleum refineries	-\$3,281,690	-0.4	-\$87,548	-\$738,258
382	Sporting and athletic goods manufacturing	-\$381,792	-1.5	-\$110,268	-\$130,896
391	All other miscellaneous manufacturing	-\$313,035	-2.1	-\$116,644	-\$130,035
396	Wholesale - Other durable goods merchant wholesalers	-\$662,964	-2.9	-\$218,400	-\$356,772
398	Wholesale - Grocery and related product wholesalers	-\$364,861	-1.9	-\$134,017	-\$191,678
399	Wholesale - Petroleum and petroleum products	-\$1,108,418	-0.9	-\$73,195	-\$983,576
406	Retail - Food and beverage stores	-\$1,021,612	-12.3	-\$510,586	-\$638,226
408	Retail - Gasoline stores	-\$1,050,083	-8.8	-\$416,578	-\$605,241
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$226,095	-3.9	-\$117,991	-\$143,784
412	Retail - Miscellaneous store retailers	-\$340,716	-6.6	-\$204,551	-\$215,815
417	Truck transportation	-\$135,490	-0.7	-\$60,133	-\$70,042
504	Other amusement and recreation industries	-\$855,697	-12.5	-\$433,921	-\$515,040
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$2,228,570	-25.2	-\$958,500	-\$1,324,367
512	Automotive repair and maintenance, except car washes	-\$996,090	-8.4	-\$643,937	-\$682,973
	Direct Impact	-\$15,010,264	-93.9	-\$4,428,831	-\$7,176,621

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	Secondary Impact	-\$23,268,237	-97.2	-\$7,052,243	-\$12,242,329
	Total Impact	-\$38,278,500	-191.0	-\$11,481,074	-\$19,418,950

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Table 5-6. Average Annual Regional Economic Tables, Alternative 3B

Overall Summary - All Metropolitan Statistical Areas Combined - Alt 3b					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		\$190,611,268	439.9	\$78,244,287	\$113,638,049
Secondary Impact		\$136,960,393	772.7	\$45,208,304	\$75,910,330
Total Impact	\$190,611,268	\$327,571,661	584.0	\$123,452,591	\$189,548,378
State		\$0	0.0	\$0	\$0
Direct Impact		\$212,804,034	474.9	\$85,493,073	\$124,027,167
Secondary Impact		\$185,527,612	962.8	\$62,584,394	\$103,929,116
Total Impact	\$212,804,034	\$398,331,646	708.0	\$148,077,467	\$227,956,283
US		\$0	0.0	\$0	\$0
Direct Impact		\$335,100,145	519.1	\$98,788,184	\$160,590,528
Secondary Impact		\$517,243,472	530.1	\$156,737,795	\$272,298,393
Total Impact	335100144.6	852343615.7	1049.2	\$255,525,980	\$432,888,921

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

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⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Note: 2023 price level.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3b					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$637,983	1.73	\$62,232	\$80,699
154	Petroleum refineries	\$0	0.00	\$0	\$0
382	Sporting and athletic goods manufacturing	\$221,557	0.86	\$59,585	\$59,552
391	All other miscellaneous manufacturing	\$411,515	2.69	\$120,984	\$121,674
396	Wholesale - Other durable goods merchant wholesalers	\$9,111,310	38.10	\$2,748,309	\$4,404,365
398	Wholesale - Grocery and related product wholesalers	\$5,744,777	30.04	\$1,971,453	\$2,718,622
399	Wholesale - Petroleum and petroleum products	\$21,617,975	14.97	\$1,383,256	\$18,761,567
406	Retail - Food and beverage stores	\$22,048,236	264.08	\$10,709,982	\$12,960,544
408	Retail - Gasoline stores	\$23,845,102	199.31	\$9,163,150	\$11,658,572
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,014,733	82.43	\$2,553,329	\$2,845,029
412	Retail - Miscellaneous store retailers	\$7,451,038	141.06	\$4,401,147	\$4,290,573
417	Truck transportation	\$2,401,820	11.71	\$1,045,159	\$1,226,831
504	Other amusement and recreation industries	\$18,914,348	289.90	\$7,614,172	\$10,294,871

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507	Hotels and motels, including casino hotels	\$0	0.00	\$0	\$0
508	Other accommodations	\$0	0.00	\$0	\$0
509	Full-service restaurants	\$48,590,138	546.11	\$20,570,135	\$27,959,601
512	Automotive repair and maintenance, except car washes	\$24,600,737	205.45	\$15,841,393	\$16,255,547
	Direct Impact	\$190,611,268	1828.52	\$78,244,287	\$113,638,049
	Secondary Impact	\$136,960,393	772.67	\$45,208,304	\$75,910,330
	Total Impact	\$327,571,661	2601.19	\$123,452,591	\$189,548,378

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3b					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$12,975,079	37.9	\$1,732,682	\$2,247,296
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$1,617,519	6.6	\$437,467	\$437,275
391	All other miscellaneous manufacturing	\$2,859,583	20.0	\$947,949	\$942,568
396	Wholesale - Other durable goods merchant wholesalers	\$11,727,145	49.1	\$3,863,292	\$6,147,836
398	Wholesale - Grocery and related product wholesalers	\$7,016,278	36.4	\$2,569,884	\$3,546,562
399	Wholesale - Petroleum and petroleum products	\$23,442,383	16.5	\$1,536,355	\$20,362,658
406	Retail - Food and beverage stores	\$22,048,236	264.1	\$11,051,014	\$13,317,378

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408	Retail - Gasoline stores	\$23,845,102	202.0	\$9,526,898	\$11,997,975
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,014,733	82.4	\$2,623,828	\$2,912,486
412	Retail - Miscellaneous store retailers	\$7,451,038	144.0	\$4,515,044	\$4,406,126
417	Truck transportation	\$2,701,714	13.6	\$1,181,127	\$1,377,157
504	Other amusement and recreation industries	\$18,914,348	290.4	\$8,619,619	\$11,121,045
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$48,590,138	546.1	\$20,965,698	\$28,875,538
512	Automotive repair and maintenance, except car washes	\$24,600,737	206.2	\$15,922,216	\$16,335,265
	Direct Impact	\$212,804,034	1915.5	\$85,493,073	\$124,027,167
	Secondary Impact	\$185,527,612	962.8	\$62,584,394	\$103,929,116
	Total Impact	\$398,331,646	2878.2	148077467	227956282.9

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3b					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$44,094,919	128.9	\$7,174,163	\$9,635,714
154	Petroleum refineries	\$74,520,165	7.3	\$1,988,062	\$16,764,247
382	Sporting and athletic goods manufacturing	\$8,468,082	34.6	\$2,291,088	\$2,903,214

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391	All other miscellaneous manufacturing	\$6,845,689	47.8	\$2,438,619	\$2,843,688
396	Wholesale - Other durable goods merchant wholesalers	\$14,676,325	61.4	\$4,834,845	\$7,898,003
398	Wholesale - Grocery and related product wholesalers	\$7,874,369	40.8	\$2,892,348	\$4,136,742
399	Wholesale - Petroleum and petroleum products	\$25,169,829	17.8	\$1,669,406	\$22,334,883
406	Retail - Food and beverage stores	\$22,048,236	264.1	\$11,051,014	\$13,774,054
408	Retail - Gasoline stores	\$23,845,102	202.0	\$9,526,898	\$13,743,724
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,014,733	82.4	\$2,623,828	\$3,189,062
412	Retail - Miscellaneous store retailers	\$7,451,038	144.0	\$4,515,044	\$4,719,630
417	Truck transportation	\$2,986,434	16.0	\$1,303,549	\$1,520,013
504	Other amusement and recreation industries	\$18,914,348	290.4	\$9,591,406	\$11,384,463
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$48,590,138	546.1	\$20,965,698	\$28,875,538
512	Automotive repair and maintenance, except car washes	\$24,600,737	206.2	\$15,922,216	\$16,867,555
	Direct Impact	\$335,100,145	2089.9	\$98,788,184	\$160,590,528
	Secondary Impact	\$517,243,472	2155.7	\$156,737,795	\$272,298,393
	Total Impact	\$852,343,616	4245.65	\$255,525,980	\$432,888,921

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

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Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3b Change From NAA					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		-\$11,283,408	-95.5	-\$4,905,774	-\$6,582,558
Secondary Impact		-\$6,913,608	-39.4	-\$2,180,777	-\$3,679,009
Total Impact	-\$11,283,408	-\$18,197,015	-125.0	-\$7,086,551	-\$10,261,567
State		\$0	0.0	\$0	\$0
Direct Impact		-\$13,620,746	-104.1	-\$5,612,357	-\$7,888,294
Secondary Impact		-\$12,078,061	-62.4	-\$4,072,432	-\$6,763,581
Total Impact	-\$13,620,746	-\$25,698,806	-155.0	-\$9,684,789	-\$14,651,875
US		\$0	0.0	\$0	\$0
Direct Impact		-\$21,872,502	-113.9	-\$6,507,905	-\$10,459,225
Secondary Impact		-\$33,889,552	-115.8	-\$10,271,176	-\$17,831,765
Total Impact	-\$21,872,502	-\$55,762,055	744.6	-\$16,779,079	-\$28,290,991

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3b Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$25,456	-0.2	-\$2,187	-\$2,826
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	-\$8,241	0.0	-\$2,113	-\$2,135
391	All other miscellaneous manufacturing	-\$55,958	-0.4	-\$20,558	-\$20,349

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396	Wholesale - Other durable goods merchant wholesalers	-\$336,727	-1.3	-\$98,382	-\$157,640
398	Wholesale - Grocery and related product wholesalers	-\$177,355	-0.9	-\$62,277	-\$85,683
399	Wholesale - Petroleum and petroleum products	-\$699,473	-0.6	-\$39,061	-\$604,362
406	Retail - Food and beverage stores	-\$1,483,102	-17.5	-\$745,834	-\$882,948
408	Retail - Gasoline stores	-\$1,533,093	-12.1	-\$650,307	-\$795,814
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$329,219	-5.3	-\$172,567	-\$189,509
412	Retail - Miscellaneous store retailers	-\$495,343	-8.4	-\$309,687	-\$305,706
417	Truck transportation	-\$186,248	-1.0	-\$85,788	-\$99,901
504	Other amusement and recreation industries	-\$1,245,512	-20.1	-\$468,360	-\$652,321
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$3,238,892	-38.0	-\$1,294,246	-\$1,802,925
512	Automotive repair and maintenance, except car washes	-\$1,468,782	-12.1	-\$954,409	-\$980,440
	Direct Impact	-\$11,283,408	-117.5	-\$4,905,774	-\$6,582,558
	Secondary Impact	-\$6,913,608	-39.4	-\$2,180,777	-\$3,679,009
	Total Impact	-\$18,197,015	-156.9	-\$7,086,551	-\$10,261,567

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3b Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				

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103	All other food manufacturing	-\$872,786	-2.7	-\$115,574	-\$149,943
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	-\$106,191	-0.5	-\$28,098	-\$28,252
391	All other miscellaneous manufacturing	-\$190,105	-1.2	-\$69,664	-\$68,924
396	Wholesale - Other durable goods merchant wholesalers	-\$771,198	-3.3	-\$254,057	-\$404,292
398	Wholesale - Grocery and related product wholesalers	-\$471,959	-2.5	-\$172,867	-\$238,565
399	Wholesale - Petroleum and petroleum products	-\$1,222,968	-1.1	-\$76,507	-\$1,060,829
406	Retail - Food and beverage stores	-\$1,483,102	-17.5	-\$752,171	-\$895,811
408	Retail - Gasoline stores	-\$1,533,093	-12.8	-\$656,040	-\$801,163
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$329,219	-5.3	-\$174,172	-\$191,205
412	Retail - Miscellaneous store retailers	-\$495,343	-9.4	-\$311,851	-\$307,880
417	Truck transportation	-\$191,596	-1.0	-\$88,214	-\$102,599
504	Other amusement and recreation industries	-\$1,245,512	-20.1	-\$567,087	-\$731,952
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$3,238,892	-38.0	-\$1,389,887	-\$1,924,770
512	Automotive repair and maintenance, except car washes	-\$1,468,782	-12.3	-\$956,171	-\$982,113
	Direct Impact	-\$13,620,746	-126.9	-\$5,612,357	-\$7,888,294
	Secondary Impact	-\$12,078,061	-62.4	-\$4,072,432	-\$6,763,581
	Total Impact	-\$25,698,806	-189.2	-\$9,684,789	-\$14,651,875

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

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U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 3b Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$2,966,102	-8.8	-\$481,760	-\$647,880
154	Petroleum refineries	-\$4,791,189	-0.5	-\$127,820	-\$1,077,838
382	Sporting and athletic goods manufacturing	-\$555,930	-2.2	-\$147,349	-\$190,597
391	All other miscellaneous manufacturing	-\$455,099	-2.9	-\$169,445	-\$189,048
396	Wholesale - Other durable goods merchant wholesalers	-\$965,141	-4.1	-\$317,947	-\$519,386
398	Wholesale - Grocery and related product wholesalers	-\$529,680	-2.8	-\$194,557	-\$278,264
399	Wholesale - Petroleum and petroleum products	-\$1,618,266	-1.2	-\$106,508	-\$1,435,995
406	Retail - Food and beverage stores	-\$1,483,102	-17.5	-\$752,171	-\$926,529
408	Retail - Gasoline stores	-\$1,533,093	-12.8	-\$656,040	-\$883,636
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$329,219	-5.3	-\$174,172	-\$209,364
412	Retail - Miscellaneous store retailers	-\$495,343	-9.4	-\$311,851	-\$313,758
417	Truck transportation	-\$197,152	-1.0	-\$90,633	-\$105,419
504	Other amusement and recreation industries	-\$1,245,512	-20.1	-\$631,594	-\$749,667
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$3,238,892	-38.0	-\$1,389,887	-\$1,924,770
512	Automotive repair and maintenance, except car washes	-\$1,468,782	-12.3	-\$956,171	-\$1,007,075
	Direct Impact	-\$21,872,502	-138.7	-\$6,507,905	-\$10,459,225
	Secondary Impact	-\$33,889,552	-141.5	-\$10,271,176	-\$17,831,765
	Total Impact	-\$55,762,055	-280.2	-\$16,779,079	-\$28,290,991

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

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³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Table 5-7. Average Annual Regional Economic Impacts, Alternative 4

Overall Summary - All Metropolitan Statistical Areas Combined - Alt 4					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		\$199,980,971	523.9	\$82,344,000	\$119,092,662
Secondary Impact		\$142,608,937	804.9	\$46,979,969	\$78,901,238
Total Impact	\$199,980,971	\$342,589,908	693.9	\$129,323,969	\$197,993,900
State		\$0	0.0	\$0	\$0
Direct Impact		\$224,208,416	566.7	\$90,203,002	\$130,627,728
Secondary Impact		\$195,655,181	1015.1	\$65,999,013	\$109,600,303
Total Impact	\$224,208,416	\$419,863,598	844.5	\$156,202,014	\$240,228,032
US		\$0	0.0	\$0	\$0
Direct Impact		\$353,445,398	619.5	\$104,250,971	\$169,361,739
Secondary Impact		\$545,674,860	632.1	\$165,354,819	\$287,257,726
Total Impact	\$353,445,398	\$899,120,259	\$298	\$269,605,789	\$456,619,465

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

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⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product
Note: 2023 price level.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 4					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$657,067	1.9	\$63,705	\$82,603
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$228,065	0.9	\$61,236	\$61,224
391	All other miscellaneous manufacturing	\$460,774	3.0	\$139,201	\$139,700
396	Wholesale - Other durable goods merchant wholesalers	\$9,371,334	39.2	\$2,824,540	\$4,526,329
398	Wholesale - Grocery and related product wholesalers	\$5,877,611	30.7	\$2,018,225	\$2,782,927
399	Wholesale - Petroleum and petroleum products	\$22,148,310	15.5	\$1,412,427	\$19,219,565
406	Retail - Food and beverage stores	\$23,294,569	278.8	\$11,338,904	\$13,703,553
408	Retail - Gasoline stores	\$25,129,689	209.4	\$9,712,616	\$12,328,466
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,290,965	86.8	\$2,698,716	\$3,004,454
412	Retail - Miscellaneous store retailers	\$7,866,991	148.1	\$4,662,671	\$4,549,025
417	Truck transportation	\$2,560,424	12.5	\$1,118,484	\$1,312,181
504	Other amusement and recreation industries	\$19,959,601	306.7	\$8,003,341	\$10,839,268
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,310,389	578.1	\$21,651,848	\$29,469,367

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512	Automotive repair and maintenance, except car washes	\$25,825,183	215.4	\$16,638,085	\$17,074,001
	Direct Impact	\$199,980,971	1926.8	\$82,344,000	\$119,092,662
	Secondary Impact	\$142,608,937	804.9	\$46,979,969	\$78,901,238
	Total Impact	\$342,589,908	2731.8	\$129,323,969	\$197,993,900

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 4					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$13,708,528	40.2	\$1,829,252	\$2,372,606
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$1,706,619	7.0	\$460,938	\$460,889
391	All other miscellaneous manufacturing	\$3,019,220	21.0	\$1,006,805	\$1,000,792
396	Wholesale - Other durable goods merchant wholesalers	\$12,374,290	51.9	\$4,076,482	\$6,487,095
398	Wholesale - Grocery and related product wholesalers	\$7,412,891	38.4	\$2,715,153	\$3,747,042
399	Wholesale - Petroleum and petroleum products	\$24,445,848	17.3	\$1,598,867	\$21,232,979
406	Retail - Food and beverage stores	\$23,294,569	278.8	\$11,683,830	\$14,070,177
408	Retail - Gasoline stores	\$25,129,689	212.6	\$10,080,117	\$12,671,371
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,290,965	86.8	\$2,770,128	\$3,072,918
412	Retail - Miscellaneous store retailers	\$7,866,991	151.9	\$4,777,884	\$4,665,904
417	Truck transportation	\$2,863,636	14.5	\$1,255,960	\$1,464,176

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504	Other amusement and recreation industries	\$19,959,601	307.3	\$9,095,199	\$11,735,076
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,310,389	578.1	\$22,132,568	\$30,492,095
512	Automotive repair and maintenance, except car washes	\$25,825,183	216.4	\$16,719,819	\$17,154,609
	Direct Impact	\$224,208,416	2022.1	\$90,203,002	\$130,627,728
	Secondary Impact	\$195,655,181	1015.1	\$65,999,013	\$109,600,303
	Total Impact	\$419,863,598	3037.1	\$156,202,014	\$240,228,032

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 4					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$46,587,498	136.2	\$7,578,549	\$10,180,004
154	Petroleum refineries	\$78,534,730	7.7	\$2,095,163	\$17,667,374
382	Sporting and athletic goods manufacturing	\$8,934,536	36.5	\$2,414,185	\$3,063,134
391	All other miscellaneous manufacturing	\$7,227,848	50.1	\$2,581,253	\$3,002,437
396	Wholesale - Other durable goods merchant wholesalers	\$15,486,215	65.0	\$5,101,649	\$8,333,842
398	Wholesale - Grocery and related product wholesalers	\$8,319,489	43.1	\$3,055,845	\$4,370,581
399	Wholesale - Petroleum and petroleum products	\$26,525,784	18.7	\$1,758,600	\$23,538,111
406	Retail - Food and beverage stores	\$23,294,569	278.8	\$11,683,830	\$14,552,668
408	Retail - Gasoline stores	\$25,129,689	212.6	\$10,080,117	\$14,484,129

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410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,290,965	86.8	\$2,770,128	\$3,364,728
412	Retail - Miscellaneous store retailers	\$7,866,991	151.9	\$4,777,884	\$4,983,102
417	Truck transportation	\$3,151,912	16.9	\$1,379,930	\$1,608,839
504	Other amusement and recreation industries	\$19,959,601	307.3	\$10,121,450	\$12,013,596
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$51,310,389	578.1	\$22,132,568	\$30,492,095
512	Automotive repair and maintenance, except car washes	\$25,825,183	216.4	\$16,719,819	\$17,707,099
	Direct Impact	\$353,445,398	2206.4	\$104,250,971	\$169,361,739
	Secondary Impact	\$545,674,860	2274.4	\$165,354,819	\$287,257,726
	Total Impact	\$899,120,259	4480.8	\$269,605,789	\$456,619,465

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 4 Change From NAA					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		\$926,623	-4.0	\$363,724	\$563,363
Secondary Impact		\$759,008	4.3	\$257,575	\$431,591
Total Impact	\$926,623	\$1,685,630	-5.2	\$621,299	\$994,953
State		\$0	0.0	\$0	\$0
Direct Impact		\$969,062	-4.2	\$379,276	\$568,102
Secondary Impact		\$829,496	4.4	\$279,939	\$464,870
Total Impact	\$969,062	\$1,798,560	-6.3	\$659,214	\$1,032,973
US		\$0	0.0	\$0	\$0

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Direct Impact		\$1,494,772	-4.6	\$436,226	\$718,376
Secondary Impact		\$2,295,375	-4.7	\$695,391	\$1,209,224
Total Impact	\$1,494,772	\$3,790,148	-2.1	\$1,131,616	\$1,927,599

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 4 Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$2,961	0.0	\$192	\$253
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$1,500	0.1	\$406	\$405
391	All other miscellaneous manufacturing	-\$122	0.0	-\$350	-\$325
396	Wholesale - Other durable goods merchant wholesalers	\$56,215	0.3	\$17,897	\$28,503
398	Wholesale - Grocery and related product wholesalers	\$38,794	0.3	\$13,106	\$18,074
399	Wholesale - Petroleum and petroleum products	\$144,832	0.2	\$10,119	\$126,083
406	Retail - Food and beverage stores	\$94,278	1.2	\$44,253	\$54,816
408	Retail - Gasoline stores	\$108,523	0.9	\$37,219	\$49,294
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$22,194	0.3	\$11,170	\$12,608
412	Retail - Miscellaneous store retailers	\$32,403	0.7	\$18,111	\$17,408
417	Truck transportation	\$8,766	0.0	\$3,448	\$4,114
504	Other amusement and recreation industries	\$83,357	1.1	\$34,518	\$46,085

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507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$210,509	2.2	\$95,062	\$125,550
512	Automotive repair and maintenance, except car washes	\$122,419	0.9	\$78,574	\$80,496
	Direct Impact	\$926,623	8.2	\$363,724	\$563,363
	Secondary Impact	\$759,008	4.3	\$257,575	\$431,591
	Total Impact	\$1,685,630	12.5	\$621,299	\$994,953

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 4 Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$55,480	0.2	\$6,998	\$9,092
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$7,158	0.0	\$1,922	\$1,911
391	All other miscellaneous manufacturing	\$12,436	0.2	\$3,508	\$3,530
396	Wholesale - Other durable goods merchant wholesalers	\$51,778	0.3	\$17,057	\$27,145
398	Wholesale - Grocery and related product wholesalers	\$30,002	0.1	\$10,988	\$15,166
399	Wholesale - Petroleum and petroleum products	\$127,498	0.0	\$8,696	\$110,885
406	Retail - Food and beverage stores	\$94,278	1.2	\$46,697	\$56,945
408	Retail - Gasoline stores	\$108,523	0.9	\$40,436	\$52,296
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$22,194	0.3	\$11,491	\$12,891

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412	Retail - Miscellaneous store retailers	\$32,403	0.7	\$18,896	\$18,216
417	Truck transportation	\$11,030	0.1	\$4,476	\$5,239
504	Other amusement and recreation industries	\$83,357	1.2	\$37,735	\$48,831
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$210,509	2.2	\$91,490	\$125,098
512	Automotive repair and maintenance, except car washes	\$122,419	0.9	\$78,883	\$80,857
	Direct Impact	\$969,062	8.5	\$379,276	\$568,102
	Secondary Impact	\$829,496	4.4	\$279,939	\$464,870
	Total Impact	\$1,798,560	12.8	\$659,214	\$1,032,973

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 4 Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$188,547	0.5	\$30,332	\$41,083
154	Petroleum refineries	\$339,157	0.0	\$9,049	\$76,298
382	Sporting and athletic goods manufacturing	\$37,477	0.2	\$10,052	\$12,848
391	All other miscellaneous manufacturing	\$29,770	0.2	\$9,880	\$12,366
396	Wholesale - Other durable goods merchant wholesalers	\$64,799	0.4	\$21,349	\$34,871
398	Wholesale - Grocery and related product wholesalers	\$33,671	0.2	\$12,368	\$17,687
399	Wholesale - Petroleum and petroleum products	\$114,554	0.0	\$7,671	\$101,650

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406	Retail - Food and beverage stores	\$94,278	1.2	\$46,697	\$58,898
408	Retail - Gasoline stores	\$108,523	0.9	\$40,436	\$62,551
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$22,194	0.3	\$11,491	\$14,113
412	Retail - Miscellaneous store retailers	\$32,403	0.7	\$18,896	\$20,526
417	Truck transportation	\$13,115	0.2	\$5,362	\$6,275
504	Other amusement and recreation industries	\$83,357	1.2	\$42,270	\$50,173
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$210,509	2.2	\$91,490	\$125,098
512	Automotive repair and maintenance, except car washes	\$122,419	0.9	\$78,883	\$83,935
	Direct Impact	\$1,494,772	9.2	\$436,226	\$718,376
	Secondary Impact	\$2,295,375	9.5	\$695,391	\$1,209,224
	Total Impact	\$3,790,148	18.6	\$1,131,616	\$1,927,599

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Table 5-8. Average Annual Regional Economic Tables, Alternative 5

Overall Summary - All Metropolitan Statistical Areas Combined - Alt 5					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					

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Direct Impact		\$197,573,091	524	\$81,369,678	\$117,646,900
Secondary Impact		\$140,795,037	795	\$46,374,997	\$77,886,146
Total Impact	\$197,573,091	\$338,368,129	694	\$127,744,675	\$195,533,045
State					
Direct Impact		\$221,578,391	567	\$89,154,837	\$129,091,447
Secondary Impact		\$193,376,592	1,003	\$65,230,287	\$108,323,664
Total Impact	\$221,578,391	\$414,954,984	844	\$154,385,124	\$237,415,110
US		\$0	\$0	\$0	\$0
Direct Impact		\$349,331,694	620	\$103,042,025	\$167,387,848
Secondary Impact		\$539,339,006	632	\$163,435,088	\$283,921,287
Total Impact	\$349,331,694	\$888,670,700	298	\$266,477,111	\$451,309,135

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Note: 2023 price level.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 5

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IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$649,391	1.9	\$63,069	\$81,774
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$224,881	0.9	\$60,378	\$60,369
391	All other miscellaneous manufacturing	\$457,465	2.9	\$138,513	\$138,984
396	Wholesale - Other durable goods merchant wholesalers	\$9,246,079	38.7	\$2,785,818	\$4,464,458
398	Wholesale - Grocery and related product wholesalers	\$5,795,717	30.3	\$1,990,330	\$2,744,461
399	Wholesale - Petroleum and petroleum products	\$21,839,509	15.2	\$1,391,881	\$18,951,208
406	Retail - Food and beverage stores	\$23,028,652	275.6	\$11,211,057	\$13,547,738
408	Retail - Gasoline stores	\$24,834,449	206.9	\$9,603,159	\$12,187,497
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,229,608	85.8	\$2,667,563	\$2,969,602
412	Retail - Miscellaneous store retailers	\$7,776,494	146.4	\$4,610,102	\$4,497,994
417	Truck transportation	\$2,532,696	12.3	\$1,106,749	\$1,298,346
504	Other amusement and recreation industries	\$19,728,589	303.2	\$7,909,691	\$10,713,055
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$50,721,165	571.5	\$21,396,997	\$29,126,344
512	Automotive repair and maintenance, except car washes	\$25,508,398	212.8	\$16,434,373	\$16,865,071
	Direct Impact	\$197,573,091	1904.2	\$81,369,678	\$117,646,900

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	Secondary Impact	\$140,795,037	794.7	\$46,374,997	\$77,886,146
	Total Impact	\$338,368,129	2699.0	\$127,744,675	\$195,533,045

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² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 5					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$13,552,040	39.7	\$1,808,832	\$2,346,100
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	\$1,686,828	6.9	\$455,606	\$455,569
391	All other miscellaneous manufacturing	\$2,984,489	20.7	\$995,865	\$989,874
396	Wholesale - Other durable goods merchant wholesalers	\$12,230,948	51.3	\$4,029,260	\$6,411,949
398	Wholesale - Grocery and related product wholesalers	\$7,328,270	38.0	\$2,684,159	\$3,704,268
399	Wholesale - Petroleum and petroleum products	\$24,137,048	17.1	\$1,578,321	\$20,964,622
406	Retail - Food and beverage stores	\$23,028,652	275.6	\$11,551,030	\$13,909,560
408	Retail - Gasoline stores	\$24,834,449	210.1	\$9,964,747	\$12,524,883
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,229,608	85.8	\$2,738,131	\$3,037,283
412	Retail - Miscellaneous store retailers	\$7,776,494	150.2	\$4,723,690	\$4,613,212
417	Truck transportation	\$2,831,417	14.3	\$1,242,189	\$1,448,101

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504	Other amusement and recreation industries	\$19,728,589	303.8	\$8,990,190	\$11,599,440
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$50,721,165	571.5	\$21,877,717	\$30,141,939
512	Automotive repair and maintenance, except car washes	\$25,508,398	213.7	\$16,515,103	\$16,944,646
	Direct Impact	\$221,578,391	1998.7	\$89,154,838	\$129,091,447
	Secondary Impact	\$193,376,592	1003.1	\$65,230,287	\$108,323,664
	Total Impact	\$414,954,984	3001.8	\$154,385,124	\$237,415,110

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³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 5					
IMPLA N Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	\$46,055,683	134.7	\$7,492,423	\$10,063,927
154	Petroleum refineries	\$77,612,051	7.6	\$2,070,547	\$17,459,805
382	Sporting and athletic goods manufacturing	\$8,830,928	36.1	\$2,386,272	\$3,027,614
391	All other miscellaneous manufacturing	\$7,144,703	49.6	\$2,552,320	\$2,967,899
396	Wholesale - Other durable goods merchant wholesalers	\$15,306,824	64.2	\$5,042,552	\$8,237,304
398	Wholesale - Grocery and related product wholesalers	\$8,224,518	42.7	\$3,020,962	\$4,320,689

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399	Wholesale - Petroleum and petroleum products	\$26,214,141	18.5	\$1,737,865	\$23,261,570
406	Retail - Food and beverage stores	\$23,028,652	275.6	\$11,551,030	\$14,386,543
408	Retail - Gasoline stores	\$24,834,449	210.1	\$9,964,747	\$14,313,959
410	Retail - Sporting goods, hobby, musical instrument and book stores	\$5,229,608	85.8	\$2,738,131	\$3,325,710
412	Retail - Miscellaneous store retailers	\$7,776,494	150.2	\$4,723,690	\$4,925,779
417	Truck transportation	\$3,115,491	16.7	\$1,364,362	\$1,590,666
504	Other amusement and recreation industries	\$19,728,589	303.8	\$10,004,305	\$11,874,550
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	\$50,721,165	571.5	\$21,877,717	\$30,141,939
512	Automotive repair and maintenance, except car washes	\$25,508,398	213.7	\$16,515,103	\$17,489,895
	Direct Impact	\$349,331,694	2180.9	\$103,042,025	\$167,387,848
	Secondary Impact	\$539,339,006	2248.1	\$163,435,088	\$283,921,287
	Total Impact	\$888,670,701	4429.0	\$266,477,112	\$451,309,136

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Overall Summary - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 5 Change From NAA					
Area	Local Capture ¹	Output ²	Jobs ³	Labor Income ⁴	Value Added ⁵
Local					
Direct Impact		-\$1,483,292	-4.0	-\$611,437	-\$883,612
Secondary Impact		-\$1,056,342	-6.0	-\$347,875	-\$584,303

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Total Impact	-\$1,483,292	-\$2,539,633	-5.2	-\$959,312	-\$1,467,916
State					
Direct Impact		-\$1,663,245	-4.2	-\$669,807	-\$969,509
Secondary Impact		-\$1,451,084	-7.6	-\$489,458	-\$812,884
Total Impact	-\$1,663,245	-\$3,114,327	-6.3	-\$1,159,266	-\$1,782,395
US					
Direct Impact		-\$2,622,530	-4.6	-\$773,781	-\$1,257,241
Secondary Impact		-\$4,046,031	-4.7	-\$1,226,022	-\$2,130,138
Total Impact	-2622530.152	-6668561.015	-2.1	-\$1,999,805	-\$3,387,378

¹ Local capture is the total economic output less the secondary (indirect and induced) effects.

² Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

³ Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

⁴ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁵ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

Local Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 5 Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$4,722	0.0	-\$444	-\$577
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	-\$1,686	0.0	-\$453	-\$451
391	All other miscellaneous manufacturing	-\$3,436	-0.1	-\$1,039	-\$1,043
396	Wholesale - Other durable goods merchant wholesalers	-\$69,135	-0.2	-\$20,853	-\$33,414
398	Wholesale - Grocery and related product wholesalers	-\$43,160	-0.2	-\$14,809	-\$20,419
399	Wholesale - Petroleum and petroleum products	-\$164,194	-0.1	-\$10,441	-\$142,469
406	Retail - Food and beverage stores	-\$171,874	-2.0	-\$83,709	-\$101,138

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408	Retail - Gasoline stores	-\$186,974	-1.5	-\$72,338	-\$91,802
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$39,217	-0.7	-\$20,011	-\$22,275
412	Retail - Miscellaneous store retailers	-\$58,174	-1.0	-\$34,505	-\$33,669
417	Truck transportation	-\$18,988	-0.2	-\$8,299	-\$9,735
504	Other amusement and recreation industries	-\$147,858	-2.4	-\$59,213	-\$80,237
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$379,236	-4.4	-\$160,008	-\$217,771
512	Automotive repair and maintenance, except car washes	-\$194,633	-1.7	-\$125,311	-\$128,610
	Direct Impact	-\$1,483,292	-14.4	-\$611,437	-\$883,612
	Secondary Impact	-\$1,056,342	-6.0	-\$347,875	-\$584,303
	Total Impact	-\$2,539,633	-20.3	-\$959,312	-\$1,467,916

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

² Jobs are presented in full-time (40 hours per week) equivalent jobs supported.

³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

State Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 5 Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$101,147	-0.3	-\$13,441	-\$17,438
154	Petroleum refineries	\$0	0.0	\$0	\$0
382	Sporting and athletic goods manufacturing	-\$12,650	-0.1	-\$3,414	-\$3,413
391	All other miscellaneous manufacturing	-\$22,326	-0.1	-\$7,442	-\$7,398
396	Wholesale - Other durable goods merchant wholesalers	-\$91,689	-0.4	-\$30,206	-\$48,067

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398	Wholesale - Grocery and related product wholesalers	-\$54,694	-0.3	-\$20,034	-\$27,646
399	Wholesale - Petroleum and petroleum products	-\$181,551	-0.2	-\$11,867	-\$157,688
406	Retail - Food and beverage stores	-\$171,874	-2.0	-\$86,221	-\$103,814
408	Retail - Gasoline stores	-\$186,974	-1.6	-\$75,037	-\$94,321
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$39,217	-0.7	-\$20,534	-\$22,775
412	Retail - Miscellaneous store retailers	-\$58,174	-1.0	-\$35,347	-\$34,523
417	Truck transportation	-\$21,218	-0.1	-\$9,308	-\$10,852
504	Other amusement and recreation industries	-\$147,858	-2.3	-\$67,366	-\$86,925
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$379,236	-4.4	-\$163,586	-\$225,368
512	Automotive repair and maintenance, except car washes	-\$194,633	-1.7	-\$126,006	-\$129,282
	Direct Impact	-\$1,663,245	-14.9	-\$669,807	-\$969,509
	Secondary Impact	-\$1,451,084	-7.6	-\$489,458	-\$812,884
	Total Impact	-\$3,114,327	-22.5	-\$1,159,266	-\$1,782,395

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

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³ Labor income represents all forms of employment earnings. In IMPLAN's regional economic model, it is the sum of employee compensation and proprietor income.

⁴ Value added consists of employee compensation, proprietary income, other property type income, and indirect business taxes. Value-added is an estimate of the gross regional or state product.

U.S. Impacts - All Metropolitan Statistical Areas Combined - 2023 Price Level - Alt 5 Change From NAA					
IMPLAN Sectors	Industries	Output ¹	Jobs ²	Labor Income ³	Value Added ⁴
	Direct Impacts				
103	All other food manufacturing	-\$343,739	-1.0	-\$55,870	-\$75,097
154	Petroleum refineries	-\$584,323	-0.1	-\$15,589	-\$131,451

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382	Sporting and athletic goods manufacturing	-\$66,222	-0.2	-\$17,885	-\$22,703
391	All other miscellaneous manufacturing	-\$53,449	-0.4	-\$19,080	-\$22,202
396	Wholesale - Other durable goods merchant wholesalers	-\$114,749	-0.4	-\$37,800	-\$61,752
398	Wholesale - Grocery and related product wholesalers	-\$61,384	-0.3	-\$22,546	-\$32,249
399	Wholesale - Petroleum and petroleum products	-\$197,360	-0.2	-\$13,083	-\$175,132
406	Retail - Food and beverage stores	-\$171,874	-2.0	-\$86,221	-\$107,375
408	Retail - Gasoline stores	-\$186,974	-1.6	-\$75,037	-\$107,766
410	Retail - Sporting goods, hobby, musical instrument and book stores	-\$39,217	-0.7	-\$20,534	-\$24,939
412	Retail - Miscellaneous store retailers	-\$58,174	-1.0	-\$35,347	-\$36,848
417	Truck transportation	-\$23,338	-0.1	-\$10,221	-\$11,915
504	Other amusement and recreation industries	-\$147,858	-2.3	-\$74,978	-\$88,995
507	Hotels and motels, including casino hotels	\$0	0.0	\$0	\$0
508	Other accommodations	\$0	0.0	\$0	\$0
509	Full-service restaurants	-\$379,236	-4.4	-\$163,586	-\$225,368
512	Automotive repair and maintenance, except car washes	-\$194,633	-1.7	-\$126,006	-\$133,452
	Direct Impact	-\$2,622,530	-16.4	-\$773,781	-\$1,257,241
	Secondary Impact	-\$4,046,031	-16.9	-\$1,226,022	-\$2,130,138
	Total Impact	-\$6,668,561	-33.3	-\$1,999,805	-\$3,387,378

¹ Output can be measured either by total value of purchases by intermediate and final consumers or by intermediate outlays plus value added. It is also known as gross revenues or sales.

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CHAPTER 6 - RECREATION EFFECTS – CAPACITY UTILIZATION

Campground occupancy rate data provided by U.S. Forest Service (USFS) recreation personnel is summarized in this section. The following tables show average occupancy rates at various USFS campgrounds at Detroit, Hills Creek, Blue River, and Cougar Reservoirs for the years 2020 to 2022. Occupancy rates are calculated by dividing the number of nights campsites are available by the number of nights they are occupied for a given time period.

The tables below show occupancy rates by reservoir for the years 2020 to 2022.

Figure 6-1. U.S. Forest Service Campground Average Occupancy Rate, Detroit Reservoir, Oregon.

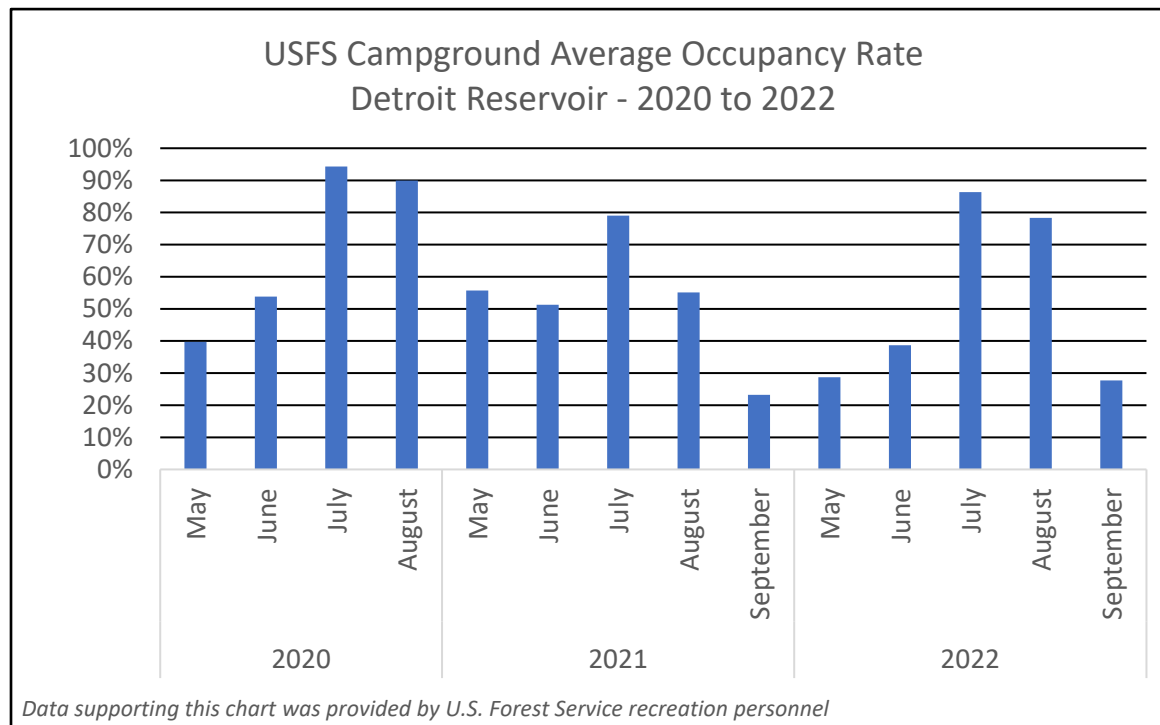


Figure 6-2. U.S. Forest Service Campground Average Occupancy Rate, Hills Creek Reservoir, Oregon.

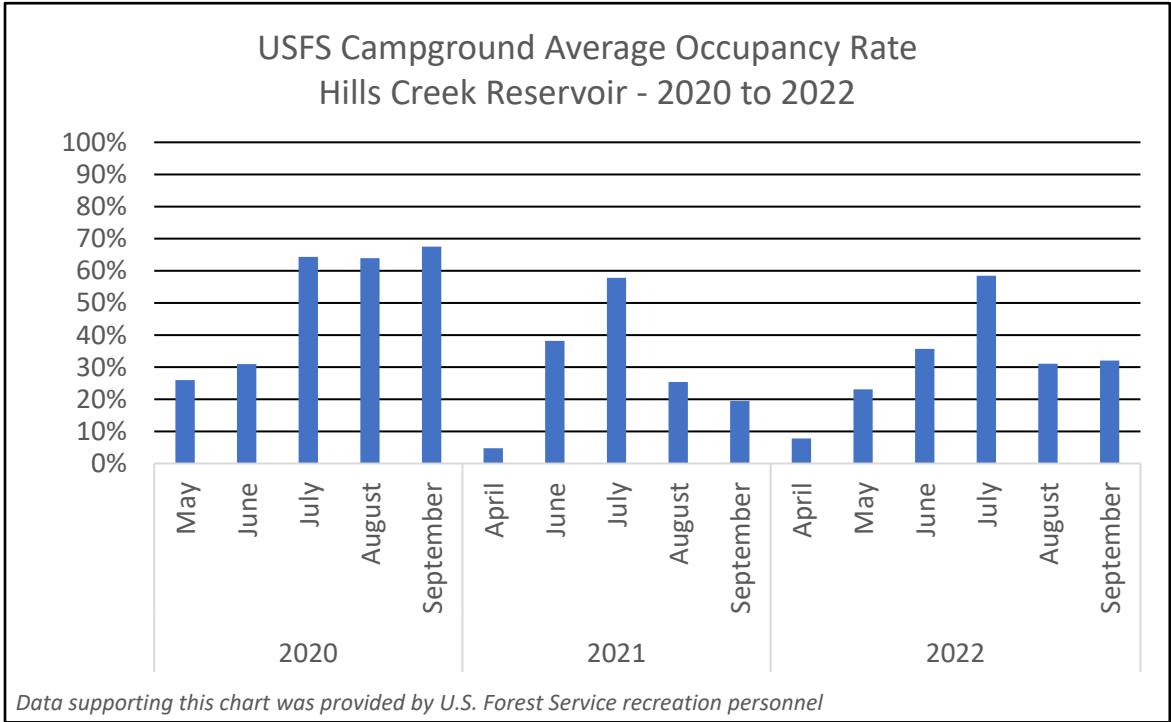


Figure 6-3. U.S. Forest Service Campground Average Occupancy Rate, Cougar Reservoir, Oregon.

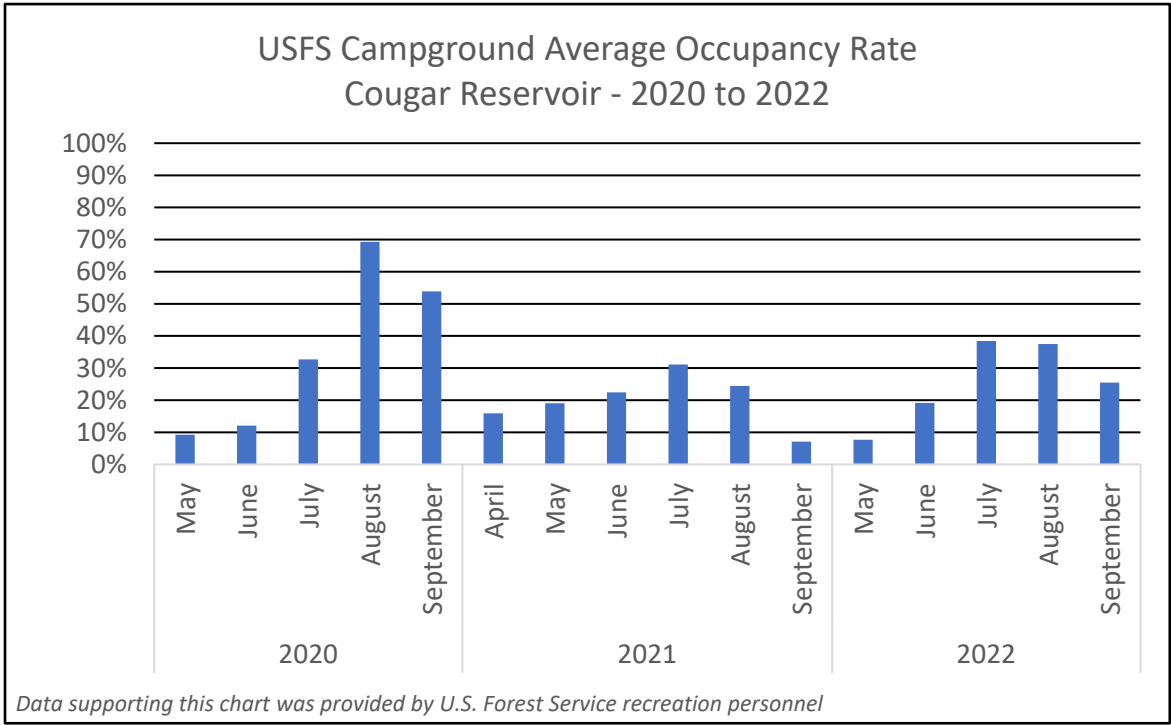


Figure 6-4. U.S. Forest Service Campground Average Occupancy Rate, Blue River Reservoir, Oregon.

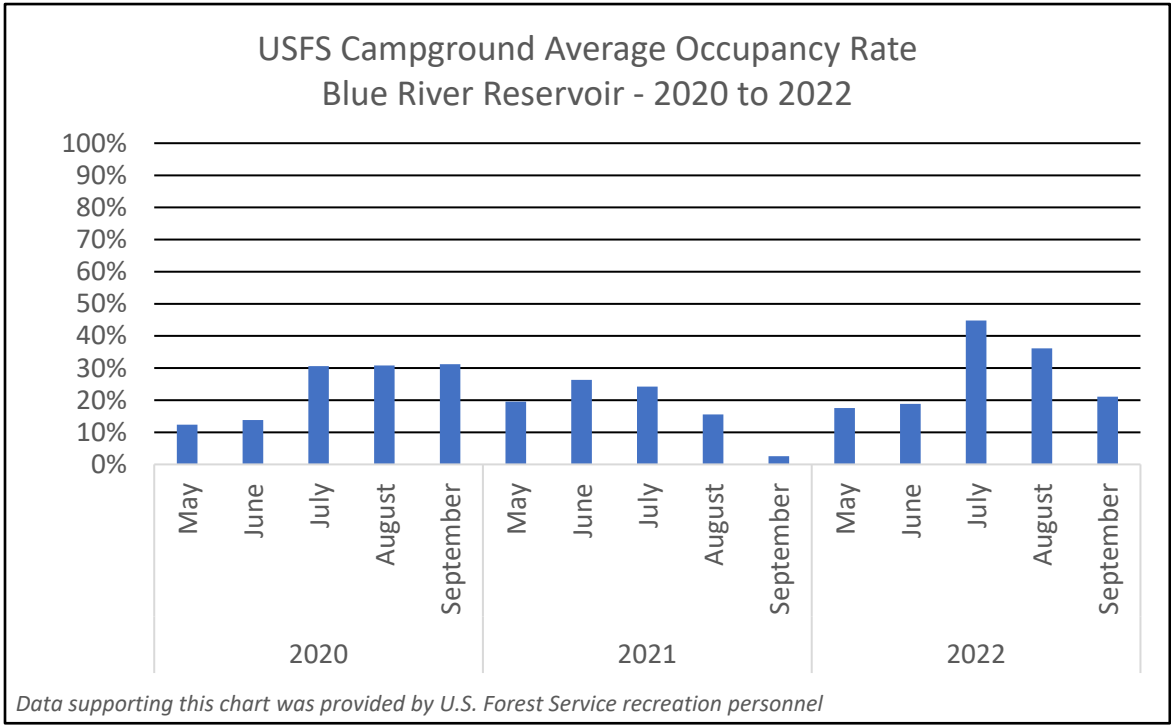
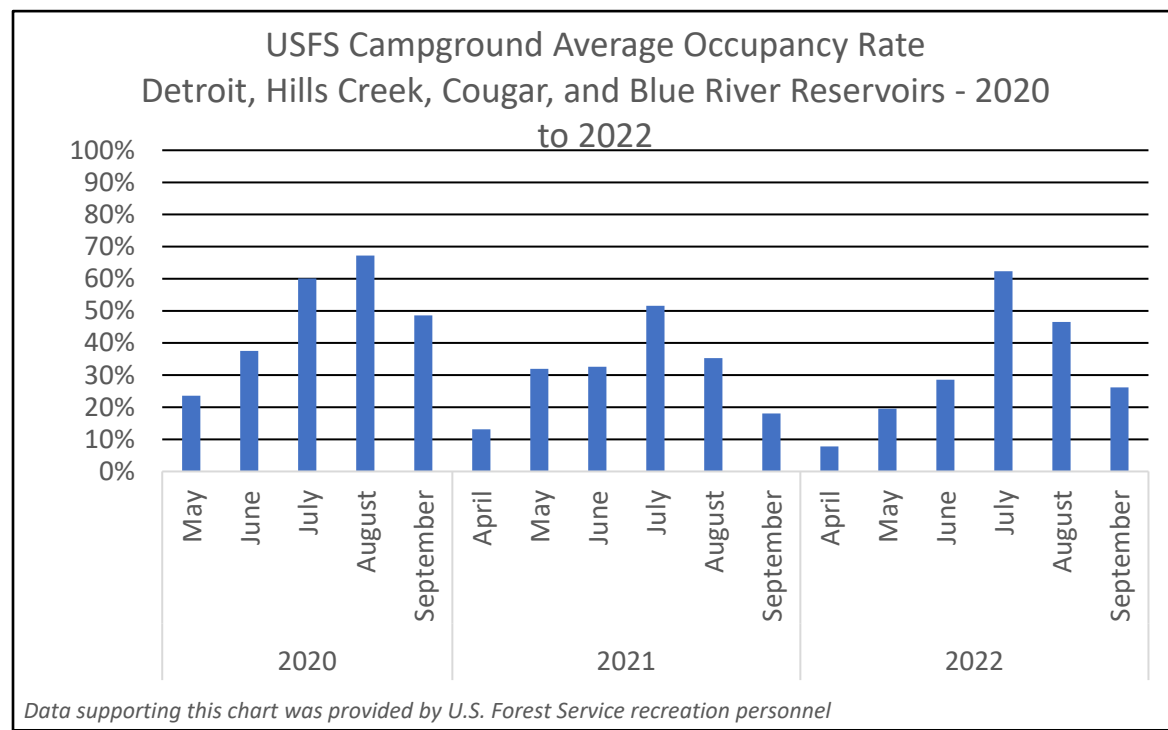


Figure 6-5. U.S. Forest Service Campground Average Occupancy Rate, Detroit, Hills Creek, Cougar, and Blue River Reservoirs, Oregon.



The tables below show occupancy rates by campground for the years 2020-2022

Figure 6-6. U.S. Forest Service Campground Average Occupancy Rate, Detroit Reservoir Campgrounds, Oregon.

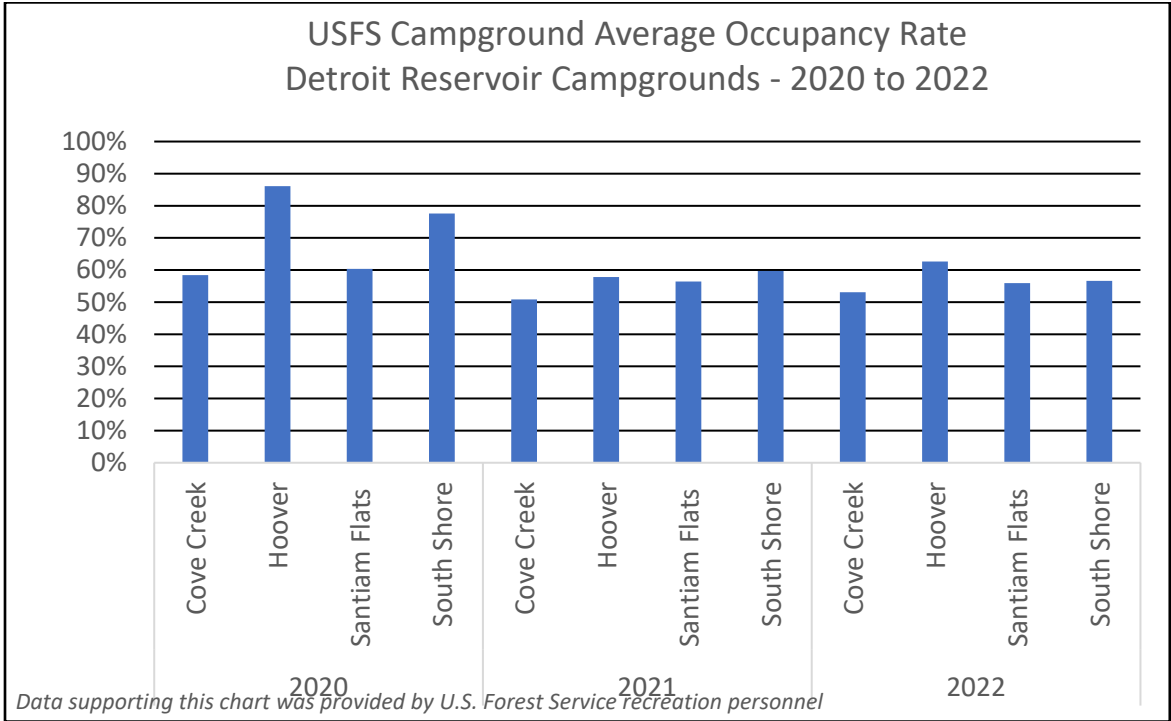


Figure 6-7. U.S. Forest Service Campground Average Occupancy Rate, Hills Creek Reservoir Campgrounds, Oregon.

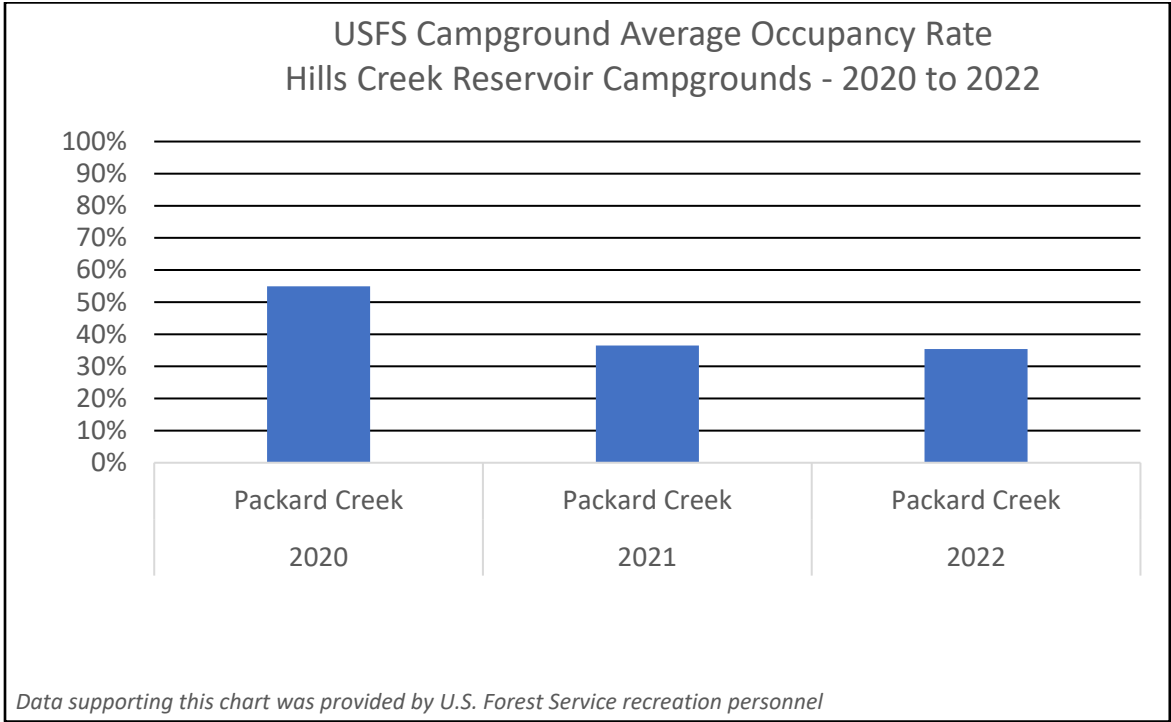


Figure 6-8. U.S. Forest Service Campground Average Occupancy Rate, Cougar Reservoir Campgrounds, Oregon.

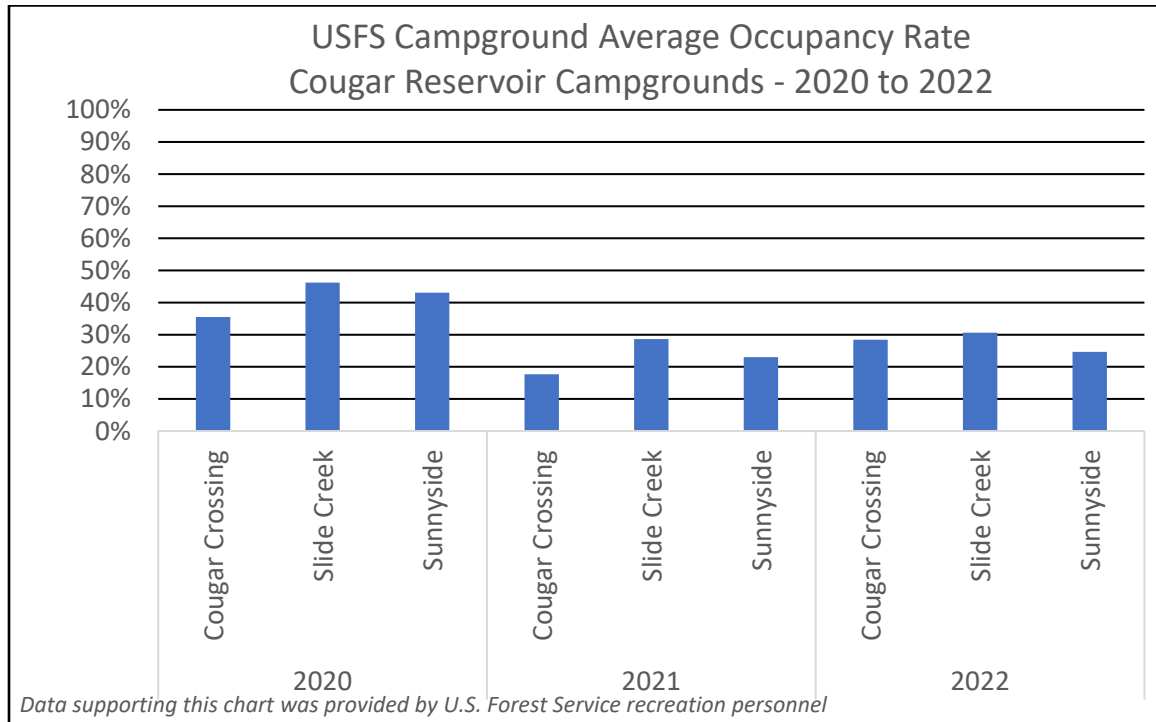


Figure 6-9. U.S. Forest Service Campground Average Occupancy Rate, Blue River Reservoir Campgrounds, Oregon.

