

**ENVIRONMENTAL ASSESSMENT  
FOR AMENDMENT OF TERMS AND CONDITIONS FOR EXEMPTIONS**

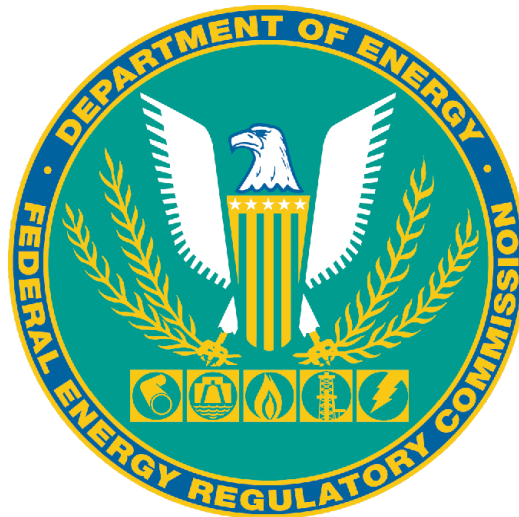
Dwight Hydroelectric Project—FERC Project No. 10675-021

Red Bridge Hydroelectric Project—FERC Project No. 10676-027

Putts Bridge Hydroelectric Project—FERC Project No. 10677-024

Indian Orchard Hydroelectric Project—FERC Project No. 10678-026

Massachusetts



Federal Energy Regulatory Commission  
Office of Energy Projects  
Division of Hydropower Administration and Compliance  
888 First Street, NE  
Washington, D.C. 20426

January 2023

## I. INTRODUCTION

- A. **Application Type:** Amendment of Terms and Conditions for Exemptions from Licensing
- B. **Date Filed:** January 7, 2022, and supplemented on September 9, 2022
- C. **Applicant's Name:** Central Rivers Power MA, LLC
- D. **Project Name:** Dwight Hydroelectric Project (No. 10675), Red Bridge Hydroelectric Project (No. 10676), Putts Bridge Hydroelectric Project (No. 10677), and Indian Orchard Hydroelectric Project (No. 10678).
- E. **Waterbody:** Chicopee River
- F. **Nearest City or town, state:** Hampden County, Massachusetts.
- G. **Federal Lands:** None

## II. PURPOSE AND NEED FOR ACTION

On September 11, 1992, the Commission issued exemptions from licensing for the Dwight,<sup>1</sup> Red Bridge,<sup>2</sup> Putts Bridge,<sup>3</sup> and Indian Orchard<sup>4</sup> projects. In order to potentially qualify for financial incentives (e.g., renewable energy credits), Central Rivers Power MA, LLC (exemptee or CRP) proposes to convert its projects' operations from cycling to an instantaneous run-of-river (ROR) mode of operation and reduce flows to the bypass reaches at the Dwight, Indian Orchard, and Red Bridge projects. The projects have historically been operated under modified terms and conditions issued by the Fish and Wildlife Service (FWS) and Massachusetts Division of Fisheries and Wildlife (DFW) dated January 27, 2000, and February 15, 2000, respectively. The associated operating requirements were defined by the Minimum Flow and Impoundment Fluctuation Monitoring Plan, approved by the Commission on August 3, 2012.<sup>5</sup>

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<sup>1</sup> *Western Massachusetts Electric Company*, 60 FERC ¶ 62,199 (1992).

<sup>2</sup> *Western Massachusetts Electric Company*, 60 FERC ¶ 62,198 (1992).

<sup>3</sup> *Western Massachusetts Electric Company*, 60 FERC ¶ 62,197 (1992).

<sup>4</sup> *Western Massachusetts Electric Company*, 60 FERC ¶ 62,196 (1992).

<sup>5</sup> *EP Energy Massachusetts*, 140 FERC ¶ 62,098 (2012).

On October 12, 2021, CRP entered into a settlement agreement (Agreement) with U.S. Fish and Wildlife Service (FWS) and Massachusetts Division of Fisheries and Wildlife (Massachusetts DFW) for CRP's hydropower projects. The goal of the Agreement is to provide for the continued operation of the projects with appropriate long-term environmental protection, enhancement, and mitigation measures that would maintain a balance of non-power and power values on the Chicopee River. As a result of the Agreement, FWS and Massachusetts DFW have provided updated terms, conditions, and recommendations which now must be incorporated into the projects' exemptions from licensing. FWS and Massachusetts DFW filed the updated terms and conditions with the Commission on January 4, 2022, and January 5, 2022, respectively. The exemptee's amendment request was filed with the Commission on January 7, 2022 and supplemented on September 9, 2022. CRP's amendment proposal also includes an Operations and Compliance Monitoring Plan (OCMP) to address how the projects would be operated to achieve, and monitored to verify compliance with, a ROR mode of operation and bypassed reach flow releases.

### **Project Description**

The Dwight project consists of the following facilities: (1) a 306-foot-long and 15-foot-high stone masonry overflow spillway dam; (2) a reservoir with a surface area of 32 acres, a storage capacity of approximately 70-acre-feet, and a normal surface elevation of 78.8 feet mean sea level (msl); (3) a 3,000-foot-long by 80-foot power canal; (4) three 7-foot-diameter and 168-foot-long penstocks; (5) a powerhouse containing three turbine-generating units at a total installed capacity of 1,464 kilowatts (kW); (6) a 3.2-mile-long transmission line; and (7) appurtenant facilities.

The Red Bridge project consists of the following facilities: (1) an 827-foot-long and 51-foot-high dam; (2) a reservoir with a storage capacity of 530 acre-feet, and a normal maximum surface elevation of 272.3 feet msl; (3) a power canal; (4) a 13-foot-diameter by 100-foot-long penstock; (5) a powerhouse containing two turbine-generating units for a total installed capacity of 3,600 kW; (6) a minimum flow gate; (7) a 4.8-mile-long transmission line; and (8) appurtenant facilities.

The Putts Bridge project consists of the following facilities: (1) a concrete gravity overflow dam about 200 feet long and 22 feet high; (2) a reservoir with a surface area of about 65 acres and a storage capacity of 323 acre-feet; (3) a headgate structure at the north abutment; (4) a powerhouse containing two turbine-generator units at a total installed capacity of 3,900 kW; (5) an 11.5-kilovolt underground cable; and (6) appurtenant facilities.

The Indian Orchard project consists of the following facilities: (1) a concrete gravity overflow dam about 402 feet long and 20 feet high; (2) a reservoir with a surface area of about 74 acres, a storage capacity of about 70 acre-feet, and a normal maximum surface elevation of 161.0 feet msl; (3) a power canal; (4) a steel penstock 190 feet long

and 11 feet in diameter, and another 160 feet long and 16 feet in diameter; (5) a powerhouse containing two turbine-generator units totaling 3,700 kW; (6) a 14.25-kilovolt transmission line; and (7) appurtenant facilities.

This environmental assessment (EA) is being prepared to satisfy the Commission's responsibilities under the National Environmental Policy Act (NEPA).<sup>6</sup> Unless otherwise stated, our analyses herein are based on the exemptee's filing and supplemental environmental review.

### **III. PROPOSED ACTION AND ALTERNATIVES**

#### **A. Proposed Action**

In its amendment application, CRP proposes to formally change the projects' operating regime from peaking, with 0.25 to 2 feet of available storage, to ROR. The proposed amendment also includes modifications to the minimum flow requirements to the bypass reaches. The exemptee's proposal includes an OCMP to address how the projects would be operated to comply with the proposed changes in operations and minimum flow releases, and how the operations would occur during periods when the reservoirs are drawn down for dam maintenance. The table below outlines the current exemption allowances and the proposed OCMP.

No new construction is proposed to the projects for these modifications. In order for the Dwight Project to meet the minimum flow requirements, it would have to pass a minimum flow depth of 0.5 foot over the spillway crest (El. 76.5 feet NGVD29) from April 15 to June 30, and 0.3 foot over the crest for the rest of the year. The Indian Orchard, Putts Bridge, and Red Bridge Projects each have an existing minimum flow gate, all of which would be adjusted to maintain the proposed minimum flows in accordance with the Agreement.

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<sup>6</sup>The Council on Environmental Quality (CEQ) issued a final rule on April 20, 2022, revising its regulations for implementing NEPA (see National Environmental Policy Act Implementing Regulations Revisions, 87 Fed. Reg. 23,453-70). The rule became effective on May 20, 2022. This EA was prepared in accordance with CEQ's 2022 regulations.

Table 1. Current and proposed project operations at CRP's Dwight, Indian Orchard, Putts Bridge, and Red Bridge Hydroelectric Projects. Flows are in cubic feet per second (cfs).

Project	FERC No.	Operation		Period	Target Headpond Elevation (NGVD29)		Bypass Flow	
		Current	Proposed		Current	Proposed	Current	Proposed
Dwight	10675	Cycle	ROR	April 15 to June 30	min. elevation of 0.25-ft below top of boards	≥77.0 feet	258 cfs	258 cfs
				Rest of Year		≥76.8 feet		134 cfs
Indian Orchard	10678	Cycle	ROR	April 1 to September 30	0.5-ft drawdown (4/1-6/30)	161.3±0.25 feet	247 cfs	144 cfs
				Rest of Year				1-ft drawdown
Putts Bridge	10677	Cycle	ROR	April 1 to June 30	1-ft drawdown	205.3±0.25 feet	25 cfs	25 cfs
				Rest of Year				2-ft drawdown
Red Bridge	10676	Cycle	ROR	April 1 to June 30	1-ft drawdown	272.3±0.25 feet	237 cfs	100 cfs
				Rest of Year				2-ft drawdown

The OCMP provides a description of the refill protocol that would be followed and how the ROR operation and the bypassed reach flow releases would be provided during periods when the headponds are drawn down for dam maintenance (including flashboard replacement). The OCMP describes the means and frequency of recording data on project operations to verify proper operations and minimum flow releases, and the protocol for maintaining such data for inspection by the Commission and the state and federal fish and wildlife agencies. Finally, the OCMP provides a plan for water quality monitoring (temperature and dissolved oxygen) in the projects' bypass reaches during the first low flow period following the Commission's issuance of the amended exemptions.

## B. No-Action Alternative

The no-action alternative is the baseline from which to compare the proposed action and any action alternatives. Under no-action, the project amendment would not be approved. The exemptee would be required to continue to operate and maintain the project, complying with the current terms and conditions. No changes would occur to the existing environment.

## IV. CONSULTATION AND COMPLIANCE

The Commission issued public notice of the amendment application on March 8, 2022, with protests, comments, and motions to intervene due to be filed by April 7, 2022. On April 7, 2022, the U.S. Department of the Interior filed a motion to intervene on behalf of the FWS and the Bureau of Indian Affairs. No comments were received pursuant to the public notice. On August 3, 2022, the Commission requested comments from the Wampanoag Tribe of Gay Head (Aquinnah), Mashpee Wampanoag Tribe, and

the Stockbridge-Munsee Community Band of Mohican Indians. No comments were received.

### **Threatened and Endangered Species**

Section 7 of the Endangered Species Act of 1973 (ESA), 16 U.S.C. § 1536, requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or to result in the destruction or adverse modification of their designated critical habitat.

Only one species federally listed as threatened or endangered has been identified as potentially occurring in the project area, the northern long-eared bat (*Myotis septentrionalis*). Based on our analysis in this EA, Commission staff conclude that the proposed amendment would have no effect on listed species.<sup>7</sup>

#### **A. National Historic Preservation Act**

Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. § 306108, requires that a federal agency “take into account” how its undertakings could affect historic properties. Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register).

The proposed action does not require any ground disturbing activities nor modifications to existing structures. The proposed ROR operation and the bypassed reach flow releases would have no effect on historic properties.

## **V. ENVIRONMENTAL ANALYSIS**

### **A. General Setting**

There are six hydroelectric projects on the mainstem Chicopee River from the confluence of the Ware, Swift, and Quaboag rivers downstream to the confluence with the Connecticut River. Red Bridge is the most upstream project on the Chicopee River, and Dwight is the most downstream project. The Chicopee River area immediately downstream of Red Bridge dam is predominantly residential with some commercial development and characterized by small hills and forested areas along both riverbanks. There are two, non-CRP hydroelectric projects on the Chicopee: the Chicopee Project

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<sup>7</sup> See Commission staff’s August 4, 2022, memorandum Updated List of Threatened, Endangered, Candidate, and Proposed Species Generated by ECOS-IPaC Website on July 20, 2022.

(Project No. 6522) and the Collins Project (Project No. 6544). Both projects operate in a ROR mode.

The Putts Bridge Project is located in the Towns of Ludlow and Wilbraham and the City of Springfield, approximately 9.2 miles upstream of the confluence with the Connecticut River. The Chicopee River area immediately downstream of Putts Bridge dam is a mixture of residential and industrial developments, characterized by tree-lined banks and exposed bedrock. About 0.6 mile downstream of the dam, the river widens into the Indian Orchard impoundment.

The Indian Orchard dam impounds a small reservoir on the Chicopee River that extends nearly to the tailwater of the Putts Bridge powerhouse at normal pool. The reservoir shoreline is wooded. The Chicopee River area immediately downstream of the Indian Orchard dam is a highly developed industrial and commercial area with some scattered residential developments between the north bank of the river and the Massachusetts Turnpike (I-90).

The Dwight Project is located in the City of Chicopee, approximately 1.3 miles upstream of the confluence with the Connecticut River. The Chicopee River downstream of Dwight dam is predominantly vegetated floodplain, bordered by extensive residential, commercial, and industrial developments along both riverbanks.

The proposed action does not require any construction or ground disturbing activity. The proposed action would have no effect on wildlife, cultural resources, or recreation. These resources will not be considered further in this document.

## **B. Geology and Soils**

No ground disturbing activities would occur as part of the proposed action. Lowering flows in the Dwight, Indian Orchard, and Red Bridge Projects bypass reaches would convert CRP's projects from a cycling mode of operation to a ROR operation, minimizing anthropogenic flow fluctuations in more than 5 miles of riverine habitat below the projects. Further, a ROR operation would minimize headpond fluctuations, stabilizing the impoundment shoreline and reducing erosion and bank sloughing. Therefore, we have determined that the proposed action would benefit shoreline and instream stability at the projects and not adversely affect these resources.

## **C. Aquatic and Fishery Resources**

The Chicopee River and waters within the project reaches are designated by the State of Massachusetts as Class B<sup>8</sup> warm water fisheries. These waters are designated as

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<sup>8</sup> As described in The Massachusetts Surface Water Quality Standards (314 CMR  
(*continued ...*)

a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth, and other critical functions. Eliminating daily cycle operations and implementing ROR operation would minimize headpond fluctuations, protect water quality and aquatic habitat, and restore naturalized flows. Therefore, Commission staff determined that the proposed action would provide overall benefits for aquatic resources along the entire length of the Chicopee River.

Regarding the proposed reduction of bypass minimum flows, site-specific instream flow studies<sup>9</sup> demonstrated that a lesser minimum bypass flow was equally or nearly as protective of aquatic habitat as the current minimum flows at each development. Site-specific study findings are summarized below:

Maintaining the existing minimum flow of 258 cubic feet per second (cfs) at the Dwight bypass reach would maintain any existing migratory fish species' habitat in the spring/early summer (April through June), but a lower flow of 134 cfs would likely provide more suitable habitat for resident species' life stages than a flow of 258 cfs. As compared to the current minimum flow requirement of 258 cfs, a flow of 134 cfs provides 10.2% to 124% more habitat for resident species. Therefore, Commission staff determined that the reduction of bypass minimum flows would be beneficial to these species in the Dwight bypass reach.

A minimum flow in the Red Bridge bypass reach of 100 cfs year-round would maintain 80 to 99 percent of the habitat suitability for all species, compared to the current minimum flow of 237 cfs. Gains in habitat suitability are less pronounced at higher flows due to increases in wetted width being offset by decreases in suitability resulting from increased areas of unsuitably higher velocities. As such, Commission staff determined that the proposed reduction in bypass flows will affect, but not likely adversely affect, aquatic resources because the majority of existing useable habitat would remain largely intact under the new regime.

A reduced spring flow of 144 cfs in the Indian Orchard bypass reach would be beneficial to life stages of juvenile resident fish in the spring/early summer (April through June) and a lesser minimum flow of 104 cfs would maintain suitable habitat during the remainder of the year. Based on analysis, a flow of 104 cfs would provide at least 83% or more available habitat to adult species assessed as compared to the current minimum flow requirement. Therefore, Commission staff determined that the proposed reduction of flows would benefit resident habitat in the spring/early summer and not

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<sup>9</sup> See section 3.2 of the Environmental Resources Analysis, included as attachment C of the exemptee's September 9, 2022, supplement. These studies were performed by a consultant on behalf of the exemptee.



adversely affect fisheries resources in the Indian Orchard bypass reach the rest of the year.

#### **D. Threatened and Endangered Species**

The only potential federally listed threatened or endangered species that might occur in the project area is the northern long-eared bat. The northern long-eared bat is currently listed as threatened, and no critical habitat has been identified for this species in the project area. Northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Northern long-eared bats spend winter hibernating in caves and mines. The proposed action would not require the removal of any trees or modifications to the projects' dams. Therefore, we have determined that the proposed action would have no effect on northern long-eared bats.

#### **E. Dam Safety**

No new construction is proposed to the projects for the proposed flow modifications. For the Dwight Project to meet the minimum flow requirements, it would have to pass a minimum flow depth of 0.5 foot over the spillway crest (El. 76.5 feet NGVD29) from April 15 to June 30, and 0.3 foot over the crest for the rest of the year. The Indian Orchard, Putts Bridge, and Red Bridge Projects each have an existing minimum flow gate, all of which would be adjusted to maintain the proposed minimum flows in accordance with the agreement.

The reservoirs are small, with reservoir surface areas ranging between 32 acres (Dwight Project) and 185 acres (Red Bridge Project). The 0.25 to 2 feet of allowable drawdown (project specific) does not result in significant storage capacity for flood storage in the reservoirs. Table 2 shows results from an internal analysis of Red Bridge Project which currently has a two-foot allowable drawdown. The analysis showed this available storage would be filled in less than 10 minutes during a 2-year storm event. Larger storm events at Red Bridge and any storm event at the other projects would fill available storages in less time. This demonstrates that even under the current operations and even for small storms, the projects have minimal available storage to attenuate the inflow hydrographs (which would affect downstream flooding) or impound inflow volume (which would affect upstream flooding). Therefore, no increases in upstream or downstream flooding are anticipated due to any loss of storage associated with a change in operations to the proposed ROR.

Table 2- Results on Internal Analysis to Estimate Time to Fill Reservoir

Project No.	Dam Name	DA <sup>1</sup> (mi <sup>2</sup> )	AEP (%)	R.I. (yrs)	Flow <sup>1</sup> (cfs)	Current Operations			Proposed Operations		
						Avg. Reservoir El. (ft-NGVD29)	Available Storage at Avg. Res. El. (ac-ft)	Time for Inflow to Fill (min.)	Avg. Reservoir El. (ft-NGVD29)	Available Storage at Avg. Res. El. (ac-ft)	Time for Inflow to Fill (min.)
P-10676	Red Bridge	663	50.0	2	6,830	270.70	90.57	9.63	272.30	0.00	0.00
			20.0	5	10,800	270.70	90.57	6.09	272.30	0.00	0.00
			10.0	10	13,900	270.70	90.57	4.73	272.30	0.00	0.00
			4.0	25	18,300	270.70	90.57	3.59	272.30	0.00	0.00
			2.0	50	22,000	270.70	90.57	2.99	272.30	0.00	0.00
			1.0	100	25,800	270.70	90.57	2.55	272.30	0.00	0.00
			0.5	200	29,900	270.70	90.57	2.20	272.30	0.00	0.00
			0.2	500	35,800	270.70	90.57	1.84	272.30	0.00	0.00

<sup>1</sup> Drainage area and flow calculated using USGS StreamStats

In addition to there being no anticipated increase in upstream and downstream flooding, it is not expected that any reduction in available storage would have adverse impacts on stability. This is because even if the current available storage were maintained under peaking operations, the reservoirs would fill quickly during their respective Inflow Design Floods (IDF) and result in essentially the same headwater and tailwater elevations as if operations had started in a ROR mode. Therefore, it is not anticipated that the proposed change in operations will adversely impact stability.

For the above reasons, we conclude that the proposed amendments would not adversely affect the safety of the project when operated and maintained in accordance with the Commission’s standards and oversight.

### Environmental Justice

According to the U.S. Environmental Protection Agency (EPA), “environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies (EPA, 2021). Meaningful involvement means:

1. people have an opportunity to participate in decisions about activities that may affect their environment and/or health;
2. the public’s contributions can influence the regulatory agency’s decision;
3. community concerns will be considered in the decision-making process; and
4. decision makers will seek out and facilitate the involvement of those potentially affected (EPA, 2021).

In conducting NEPA reviews of proposed hydropower projects, the Commission follows the instruction of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, which directs federal agencies to identify and address “disproportionately high and adverse human health or environmental effects” of their actions on minority and low-income populations (i.e., environmental justice communities).<sup>10</sup> Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, also directs agencies to develop “programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.”<sup>11</sup> The term “environmental justice community” includes disadvantaged communities that have been historically marginalized and overburdened by pollution.<sup>12</sup> Environmental justice communities include, but may not be limited to minority populations, low-income populations, or indigenous peoples.<sup>13</sup>

Commission staff used the Federal Interagency Working Group on Environmental Justice & NEPA Committee’s publication, *Promising Practices for EJ Methodologies in NEPA Reviews (Promising Practices)* (EPA, 2016), which provides methodologies for conducting environmental justice analyses throughout the NEPA process for this project. Commission staff’s use of these methodologies is described throughout this section.

Commission staff used EJScreen 2.0, EPA’s environmental justice mapping and screening tool, as an initial step to gather information regarding minority and/or low-income populations; potential environmental quality issues; environmental and demographic indicators; and other important factors. EPA recommends that screening tools, such as EJScreen, be used for a “screening-level” look and a useful first step in understanding or highlighting locations that may require further review.

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<sup>10</sup> Exec. Order No. 12,898, 59 Fed. Reg. 7629, at 7629, 7632 (Feb. 11, 1994).

<sup>11</sup> Exec. Order No. 14,008, 86 Fed. Reg. 7619, at 7629 (Jan. 27, 2021).

<sup>12</sup> *Id.*

<sup>13</sup> See EPA, *EJ 2020 Glossary* (Aug. 18, 2022), <https://www.epa.gov/environmentaljustice/ej-2020-glossary>.

*Meaningful Engagement and Public Involvement*

The Council on Environmental Quality's (CEQ) *Environmental Justice Guidance Under the National Environmental Policy Act (CEQ Environmental Justice Guidance)* (CEQ, 1997) and *Promising Practices* recommend that federal agencies provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices.<sup>14</sup> They also recommend using adaptive approaches to overcome linguistic, institutional, cultural, economic, historical, or other potential barriers to effective participation in the decision-making processes of federal agencies. In addition, Section 8 of Executive Order 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, strongly encourages independent agencies to “consult with members of communities that have been historically underrepresented in the Federal Government and underserved by, or subject to discrimination in, federal policies and programs.”

As discussed in section IV *Consultation and Compliance* of this EA, there have been opportunities for public involvement during the Commission's review process, although the record does not demonstrate that these opportunities were targeted at engaging environmental justice communities. The Commission's issued a Notice of Application to Amend Terms and Conditions for Exemptions, and Soliciting Comments, Motions to Intervene, and Protests on March 8, 2022, which established a 30-day comment period and intervention deadline. No comments were received on the application.

All documents that form the administrative record for these proceedings, with the exclusion of privileged or critical energy infrastructure information, are available to the public electronically on the FERC's website ([www.ferc.gov](http://www.ferc.gov)). We recognize that not everyone has internet access or is able to file electronic comments. Anyone may comment to FERC about the proceeding, either in writing or electronically. Commission staff has consistently emphasized with the public that all comments receive equal weight by Commission staff for consideration in the EA.

Regarding future engagement and involvement, in 2021, the Commission established the Office of Public Participation (OPP) to support meaningful public engagement and participation in Commission proceedings. OPP provides members of the

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<sup>14</sup> CEQ, ENVIRONMENTAL JUSTICE: GUIDANCE UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT, 4 (Dec. 1997) (CEQ's Environmental Justice Guidance), [https://www.energy.gov/sites/default/files/nepapub/nepa\\_documents/RedDont/GCEQ-EJGuidance.pdf](https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/GCEQ-EJGuidance.pdf).

public, including environmental justice communities, landowners, Tribal citizens, and consumer advocates, with assistance in FERC proceedings—including navigating Commission processes and activities relating to the Project. For assistance with interventions, comments, requests for rehearing, or other filings, and for information about any applicable deadlines for such filings, members of the public are encouraged to contact OPP directly at 202-502-6592 or [OPP@ferc.gov](mailto:OPP@ferc.gov) for further information.

### *Identification of Environmental Justice Communities*

According to CEQ's *Environmental Justice Guidance and Promising Practices*, minority populations are those groups that include: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. Following the recommendations set forth in *Promising Practices*, FERC uses the **50 percent** and the **meaningfully greater analysis** methods to identify minority populations. Using this methodology, minority populations are defined in this EA where either: (a) the aggregate minority population of the block groups in the affected area exceeds 50 percent; or (b) the aggregate minority population in the block group affected is 10 percent higher than the aggregate minority population percentage in the county. The guidance also directs low-income populations to be identified based on the annual statistical poverty thresholds from the U.S. Census Bureau. Using *Promising Practices*' **low-income threshold criteria** method, low-income populations are identified as census block groups where the percent low-income population in the identified block group is equal to or greater than that of the county. Here, Commission staff selected Hampden and Hampshire Counties, Massachusetts, as the comparable reference community to ensure that affected environmental justice communities are properly identified. A reference community may vary according to the characteristics of the particular project and the surrounding communities.

According to the current U.S. Census Bureau information, minority and low-income populations exist within the Project area, as discussed further below. Table 3 below identifies the minority populations by race and ethnicity and low-income populations within Massachusetts, the counties affected by the proposed amendment (Hampden and Hampshire Counties), and U.S. census block groups within vicinity of the project site. For this project, staff chose a 1-mile radius around a 17-mile section of the Chicopee River as the study area impacted by the amendment (Figure 1). This 17-mile section of the river stretches from the furthest downstream project, Dwight, through the furthest upstream project, Red Bridge. The proposed action would have the potential to effect flows thought this entire section of the river, therefore requiring analysis over the greater distance than that of the cumulative project boundaries alone. Staff determined that a 1-mile radius along that river stretch is the appropriate unit of geographic analysis given the limited scope of the proposed action and concentration of project-related effects. To ensure we are using the most recent available data, we use U.S. Census

American Community Survey File #B03002 for the race and ethnicity data and Survey File #B17017 for poverty data at the census block group level.<sup>15</sup>

As presented in Table 3, 32 of the 67 block groups of Hampden County, within the geographic scope of the project, are considered environmental justice communities. The single affected block group of Hampshire County was not identified as an environmental justice community. Based on our thresholds, 12 block groups are environmental justice communities with a minority population meaningfully greater than the minority population within its surrounding county (41.03%). Eight block groups qualify as low-income populations. The remaining 12 block groups qualify as environmental justice communities with both a minority population and a low-income population.

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<sup>15</sup> U.S. Census Bureau, American Community Survey 2019 ACS 5-Year Estimates Detailed Tables, File# B17017, Poverty Status in the Past 12 Months by Household Type by Age of Householder, <https://data.census.gov/cedsci/table?q=B17017>; File #B03002 Hispanic or Latino Origin By Race, <https://data.census.gov/cedsci/table?q=b03002>.

**Table 3.** Minority populations by race and ethnicity and low-income populations within 1-mile of the proposed project amendment.

Geographic Area	Type	Race and Ethnicity									Low-Income		
		Total Population	White <sup>a</sup>	Black or African American <sup>a</sup>	American Indian & Alaska Native <sup>a</sup>	Asian <sup>a</sup>	Native Hawaiian & Other Pacific Islander <sup>a</sup>	Some Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino (any race) <sup>a</sup>	Total Minority Population <sup>a</sup>	Total Households	Households in Poverty
State of Massachusetts	n	6850553	4903539	473181	9667	449793	2210	56363	146621	809179		2617497	283603
	%		71.6%	6.9%	0.1%	6.6%	>0.1%	0.8%	2.1%	11.8%	28.4%		10.8%
Hampden County	n	467871	293556	36142	694	10767	11	511	8430	117760		179423	29407
	%		62.7%	7.7%	0.1%	2.3%	>0.1%	0.1%	1.8%	25.2%	37.3%		16.4%
Census Tract 800101, Block Group 1	n	988	435	205	0	53	0	0	26	269		442	40
	%		44.0%	20.7%	0.0%	5.4%	0.0%	0.0%	2.6%	27.2%	56.0%*		9.0%
Census Tract 800101, Block Group 2	n	1485	250	479	0	0	0	76	0	680		463	128
	%		16.8%	32.3%	0.0%	0.0%	0.0%	5.1%	0.0%	45.8%	83.2%*		27.6%*
Census Tract 800101, Block Group 3	n	1564	783	300	0	11	0	0	80	390		632	44
	%		50.1%	19.2%	0.0%	0.7%	0.0%	0.0%	5.1%	24.9%	49.9%*		7.0%
Census Tract 800102, Block Group 1	n	2029	627	641	0	82	0	0	56	623		691	90
	%		30.9%	31.6%	0.0%	4.0%	0.0%	0.0%	2.8%	30.7%	69.1%*		13.0%
Census Tract 800102, Block Group 2	n	1192	387	167	0	21	0	0	37	580		377	111
	%		32.5%	14.0%	0.0%	1.8%	0.0%	0.0%	3.1%	48.7%	67.5%*		29.4%*
Census Tract 800102, Block Group 3	n	1218	415	355	0	0	0	0	0	448		562	145
	%		34.1%	29.1%	0.0%	0.0%	0.0%	0.0%	0.0%	36.8%	65.9%*		25.8%*
Census Tract 800201, Block Group 1	n	1253	303	130	0	0	0	0	0	820		413	250
	%		24.2%	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	65.4%	75.8%*		60.5%*
Census Tract 800201, Block Group 2	n	1734	869	1	0	0	0	0	28	836		636	0
	%		50.1%	>0.1%	0.0%	0.0%	0.0%	0.0%	1.6%	48.2%	49.9%*		0.0%
Census Tract 800201, Block Group 3	n	1095	234	73	0	208	0	0	0	580		289	10
	%		21.4%	6.7%	0.0%	19.0%	0.0%	0.0%	0.0%	53.0%	78.6%*		3.5%
Census Tract	n	1524	664	343	0	80	0	0	35	402		671	58

		Race and Ethnicity										Low-Income	
Geographic Area	Type	Total Population	White <sup>a</sup>	Black or African American <sup>a</sup>	American Indian & Alaska Native <sup>a</sup>	Asian <sup>a</sup>	Native Hawaiian & Other Pacific Islander <sup>a</sup>	Some Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino (any race) <sup>a</sup>	Total Minority Population <sup>a</sup>	Total Households	Households in Poverty
800201, Block Group 5	%		43.6%	22.5%	0.0%	5.2%	0.0%	0.0%	2.3%	26.4%	56.4%*		8.6%
Census Tract 800202, Block Group 1	n	1482	729	82	0	11	0	0	30	630		555	68
	%		49.2%	5.5%	0.0%	0.7%	0.0%	0.0%	2.0%	42.5%	50.8%*		12.3%
Census Tract 800300, Block Group 1	n	1494	535	202	0	63	0	0	2	692		582	76
	%		35.8%	13.5%	0.0%	4.2%	0.0%	0.0%	0.1%	46.3%	64.2%*		13.1%
Census Tract 800300, Block Group 4	n	885	494	83	6	0	0	0	32	270		381	121
	%		55.8%	9.4%	0.7%	0.0%	0.0%	0.0%	3.6%	30.5%	44.2%*		31.8%*
Census Tract 800400, Block Group 4	n	991	464	55	0	0	0	0	0	472		453	24
	%		46.8%	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%	47.6%	53.2%*		5.3%
Census Tract 801401, Block Group 1	n	1755	63	436	0	144	0	0	15	1097		583	268
	%		3.6%	24.8%	0.0%	8.2%	0.0%	0.0%	0.9%	62.5%	96.4%*		46.0%*
Census Tract 801503, Block Group 1	n	1522	321	516	0	26	0	0	26	633		543	170
	%		21.1%	33.9%	0.0%	1.7%	0.0%	0.0%	1.7%	41.6%	78.9%*		31.3%*
Census Tract 810300, Block Group 1	n	1740	1692	16	0	32	0	0	0	0		618	120
	%		97.2%	0.9%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	2.8%		19.4%*
Census Tract 810300, Block Group 2	n	1791	1307	102	0	0	0	0	200	182		687	108
	%		73.0%	5.7%	0.0%	0.0%	0.0%	0.0%	11.2%	10.2%	27.0%		15.7%
Census Tract 810403, Block Group 1	n	1378	1138	45	0	0	0	0	0	195		586	27
	%		82.6%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	14.2%	17.4%		4.6%
Census Tract 810403, Block Group 2	n	1626	1308	3	0	0	0	0	15	300		553	141
	%		80.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.9%	18.5%	19.6%		25.5%*
Census Tract 810403, Block Group 3	n	1105	1037	0	0	0	0	0	9	59		479	40
	%		93.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	5.3%	6.2%		8.4%
Census Tract 810404, Block Group 1	n	1195	1046	0	0	0	0	0	38	111		416	0
	%		87.5%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	9.3%	12.5%		0.0%



		Race and Ethnicity										Low-Income	
Geographic Area	Type	Total Population	White <sup>a</sup>	Black or African American <sup>a</sup>	American Indian & Alaska Native <sup>a</sup>	Asian <sup>a</sup>	Native Hawaiian & Other Pacific Islander <sup>a</sup>	Some Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino (any race) <sup>a</sup>	Total Minority Population <sup>a</sup>	Total Households	Households in Poverty
Census Tract 810404, Block Group 2	n	2600	2448	1	0	0	0	0	62	89		1064	63
	%		94.2%	>0.1%	0.0%	0.0%	0.0%	0.0%	2.4%	3.4%	5.8%		5.9%
Census Tract 810412, Block Group 1	n	2182	1953	16	0	94	0	0	75	44		952	100
	%		89.5%	0.7%	0.0%	4.3%	0.0%	0.0%	3.4%	2.0%	10.5%		10.5%
Census Tract 810412, Block Group 2	n	2374	2178	0	0	42	0	0	0	154		848	40
	%		91.7%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	6.5%	8.3%		4.7%
Census Tract 810412, Block Group 3	n	1731	1462	30	24	0	0	0	72	143		651	16
	%		84.5%	1.7%	1.4%	0.0%	0.0%	0.0%	4.2%	8.3%	15.5%		2.5%
Census Tract 810414, Block Group 2	n	1518	1253	0	0	53	0	0	135	77		547	48
	%		82.5%	0.0%	0.0%	3.5%	0.0%	0.0%	8.9%	5.1%	17.5%		8.8%
Census Tract 810414, Block Group 3	n	3377	3319	0	0	0	0	0	0	58		1200	149
	%		98.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	1.7%		12.4%
Census Tract 810601, Block Group 1	n	971	815	24	0	0	0	0	0	132		527	118
	%		83.9%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	13.6%	16.1%		22.4%*
Census Tract 810601, Block Group 2	n	2194	1599	101	0	193	0	0	0	301		1134	246
	%		72.9%	4.6%	0.0%	8.8%	0.0%	0.0%	0.0%	13.7%	27.1%		21.7%*
Census Tract 810601, Block Group 3	n	1070	552	64	0	93	0	0	51	310		396	0
	%		51.6%	6.0%	0.0%	8.7%	0.0%	0.0%	4.8%	29.0%	48.4%*		0.0%
Census Tract 810602, Block Group 1	n	2712	2679	14	10	0	0	0	0	9		1034	37
	%		98.8%	0.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.3%	1.2%		3.6%
Census Tract 810700, Block Group 1	n	1431	1101	15	10	24	0	0	97	184		601	93
	%		76.9%	1.0%	0.7%	1.7%	0.0%	0.0%	6.8%	12.9%	23.1%		15.5%
Census Tract 810700, Block Group 2	n	983	807	16	0	45	0	0	70	45		380	0
	%		82.1%	1.6%	0.0%	4.6%	0.0%	0.0%	7.1%	4.6%	17.9%		0.0%

		Race and Ethnicity										Low-Income	
Geographic Area	Type	Total Population	White <sup>a</sup>	Black or African American <sup>a</sup>	American Indian & Alaska Native <sup>a</sup>	Asian <sup>a</sup>	Native Hawaiian & Other Pacific Islander <sup>a</sup>	Some Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino (any race) <sup>a</sup>	Total Minority Population <sup>a</sup>	Total Households	Households in Poverty
Census Tract 810700, Block Group 3	n	1262	622	0	0	0	0	0	31	609		503	73
	%		49.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	48.3%	50.7%*		14.5%
Census Tract 810700, Block Group 4	n	1107	818	224	0	0	0	0	0	65		427	0
	%		73.9%	20.2%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	26.1%		0.0%
Census Tract 810700, Block Group 5	n	1551	1014	64	0	0	0	0	16	457		665	106
	%		65.4%	4.1%	0.0%	0.0%	0.0%	0.0%	1.0%	29.5%	34.6%		15.9%
Census Tract 810800, Block Group 1	n	1350	957	5	0	0	0	0	12	376		666	90
	%		70.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.9%	27.9%	29.1%		13.5%
Census Tract 810800, Block Group 2	n	1356	674	85	0	0	0	0	0	597		580	136
	%		49.7%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	44.0%	50.3%*		23.4%*
Census Tract 810800, Block Group 3	n	1150	992	0	0	0	0	0	18	140		424	0
	%		86.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	12.2%	13.7%		0.0%
Census Tract 810901, Block Group 1	n	1963	952	104	0	30	0	0	11	866		857	221
	%		48.5%	5.3%	0.0%	1.5%	0.0%	0.0%	0.6%	44.1%	51.5%*		25.8%*
Census Tract 810902, Block Group 1	n	1741	1441	44	0	18	0	19	0	219		528	8
	%		82.8%	2.5%	0.0%	1.0%	0.0%	1.1%	0.0%	12.6%	17.2%		1.5%
Census Tract 810902, Block Group 2	n	565	246	12	0	0	0	0	0	307		264	29
	%		43.5%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	54.3%	56.5%*		11.0%
Census Tract 810902, Block Group 3	n	1335	1190	3	0	0	0	0	3	139		613	65
	%		89.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%	10.4%	10.9%		10.6%
Census Tract 810902, Block Group 4	n	734	182	24	0	0	0	0	9	519		263	108
	%		24.8%	3.3%	0.0%	0.0%	0.0%	0.0%	1.2%	70.7%	75.2%*		41.1%*
Census Tract 811000, Block Group 1	n	826	646	0	0	24	0	0	0	156		354	67
	%		78.2%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	18.9%	21.8%		18.9%*

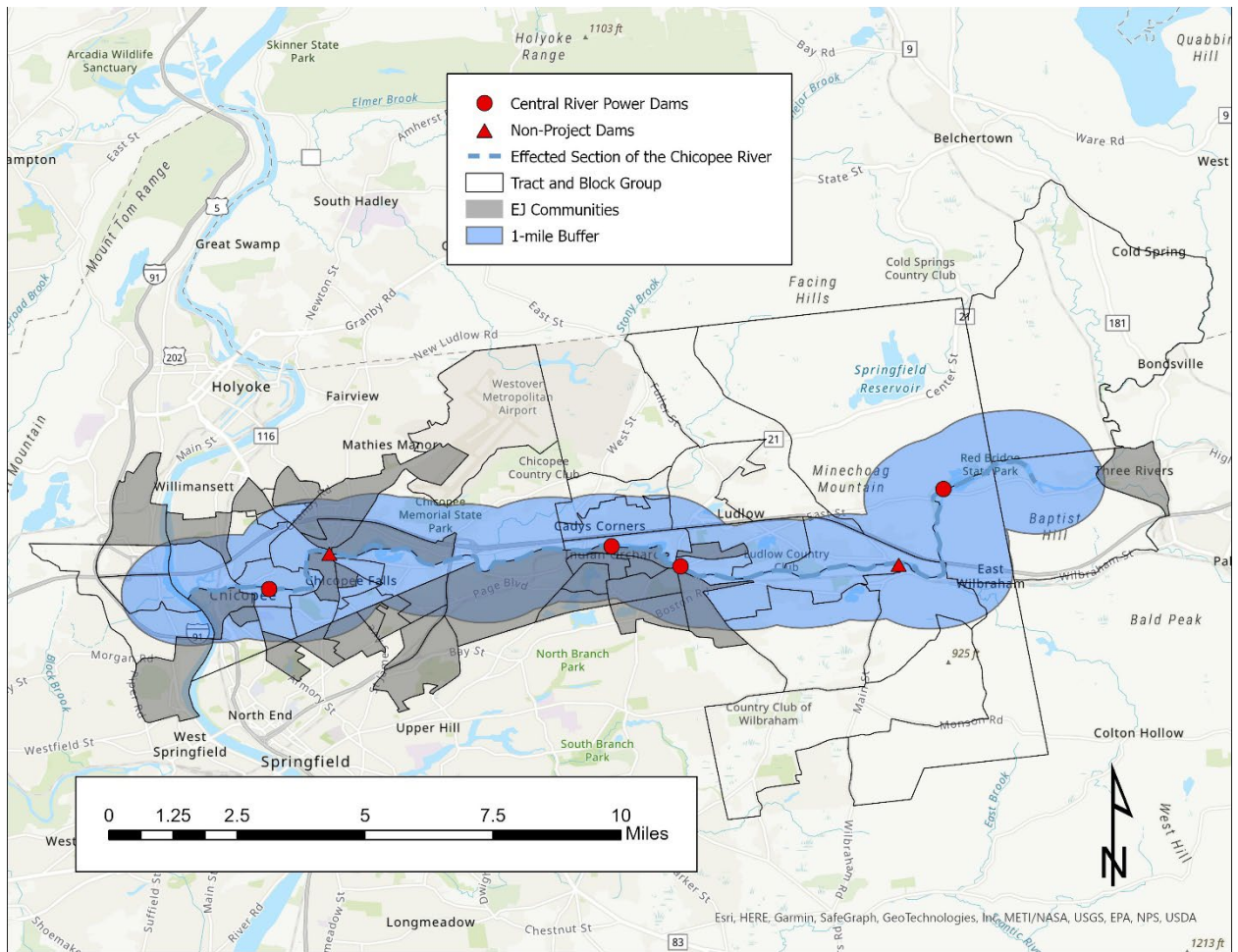
		Race and Ethnicity										Low-Income	
Geographic Area	Type	Total Population	White <sup>a</sup>	Black or African American <sup>a</sup>	American Indian & Alaska Native <sup>a</sup>	Asian <sup>a</sup>	Native Hawaiian & Other Pacific Islander <sup>a</sup>	Some Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino (any race) <sup>a</sup>	Total Minority Population <sup>a</sup>	Total Households	Households in Poverty
Census Tract 811000, Block Group 2	n	724	690	34	0	0	0	0	0	0		344	0
	%		95.3%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%		0.0%
Census Tract 811000, Block Group 3	n	663	585	0	0	0	0	0	0	78		368	12
	%		88.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	11.8%		3.3%
Census Tract 811000, Block Group 4	n	899	694	0	0	0	0	0	56	149		375	38
	%		77.2%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	16.6%	22.8%		10.1%
Census Tract 811000, Block Group 5	n	1242	1086	0	0	139	0	0	0	17		510	14
	%		87.4%	0.0%	0.0%	11.2%	0.0%	0.0%	0.0%	1.4%	12.6%		2.7%
Census Tract 811102, Block Group 2	n	1770	789	113	0	0	0	0	0	868		738	223
	%		44.6%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	49.0%	55.4%*		30.2%*
Census Tract 811102, Block Group 3	n	1124	1068	0	0	20	0	0	0	36		465	0
	%		95.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	3.2%	5.0%		0.0%
Census Tract 811200, Block Group 2	n	1080	886	0	0	0	0	0	0	194		419	78
	%		82.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%		18.6%*
Census Tract 811200, Block Group 3	n	1176	833	0	0	81	0	0	0	262		503	0
	%		70.8%	0.0%	0.0%	6.9%	0.0%	0.0%	0.0%	22.3%	29.2%		0.0%
Census Tract 811302, Block Group 1	n	0	0	0	0	0	0	0	0	0		0	0
	%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%
Census Tract 812103, Block Group 2	n	2903	942	282	0	0	0	0	20	1659		1037	268
	%		32.4%	9.7%	0.0%	0.0%	0.0%	0.0%	0.7%	57.1%	67.6%*		25.8%*
Census Tract 812201, Block Group 3	n	1731	1496	0	0	100	0	0	108	27		984	217
	%		86.4%	0.0%	0.0%	5.8%	0.0%	0.0%	6.2%	1.6%	13.6%		22.1%*
Census Tract 812202, Block Group 1	n	2211	1409	104	0	85	0	4	57	552		1173	81
	%		63.7%	4.7%	0.0%	3.8%	0.0%	0.2%	2.6%	25.0%	36.3%		6.9%

		Race and Ethnicity										Low-Income	
Geographic Area	Type	Total Population	White <sup>a</sup>	Black or African American <sup>a</sup>	American Indian & Alaska Native <sup>a</sup>	Asian <sup>a</sup>	Native Hawaiian & Other Pacific Islander <sup>a</sup>	Some Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino (any race) <sup>a</sup>	Total Minority Population <sup>a</sup>	Total Households	Households in Poverty
Census Tract 812202, Block Group 2	n	632	426	24	0	14	0	0	11	157		341	53
	%		67.4%	3.8%	0.0%	2.2%	0.0%	0.0%	1.7%	24.8%	32.6%		15.5%
Census Tract 812202, Block Group 3	n	1019	943	7	0	0	0	0	0	69		540	63
	%		92.5%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	7.5%		11.7%
Census Tract 813601, Block Group 1	n	866	718	0	0	0	0	0	0	148		435	28
	%		82.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.1%	17.1%		6.4%
Census Tract 813601, Block Group 2	n	2465	2189	52	0	10	0	0	0	214		841	34
	%		88.8%	2.1%	0.0%	0.4%	0.0%	0.0%	0.0%	8.7%	11.2%		4.0%
Census Tract 813601, Block Group 4	n	641	633	0	0	0	0	0	0	8		192	0
	%		98.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	1.2%		0.0%
Census Tract 813601, Block Group 5	n	1574	1193	44	0	0	0	0	0	337		645	106
	%		75.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	21.4%	24.2%		<b>16.4%*</b>
Census Tract 813601, Block Group 6	n	1146	1064	0	0	0	0	0	0	82		370	0
	%		92.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.2%	7.2%		0.0%
Census Tract 813602, Block Group 1	n	1129	906	63	0	20	0	0	32	108		334	15
	%		80.2%	5.6%	0.0%	1.8%	0.0%	0.0%	2.8%	9.6%	19.8%		4.5%
Census Tract 813602, Block Group 2	n	2863	2384	229	0	103	0	0	38	109		1143	45
	%		83.3%	8.0%	0.0%	3.6%	0.0%	0.0%	1.3%	3.8%	16.7%		3.9%
Hampshire County	n	161032	134786	4027	182	8430	128	184	4248	9047		58838	6827
	%		83.7%	2.5%	0.1%	5.2%	>0.1%	0.1%	2.6%	5.6%	16.3%		11.6%
Census Tract 820204, Block Group 1	n	2944	2827	10	0	89	0	0	0	18		931	86
	%		96.0%	0.3%	0.0%	3.0%	0.0%	0.0%	0.0%	0.6%	4.0%		9.2%

Note: Low-income or minority populations exceeding the established thresholds are indicated by bold, red type, an asterisk (\*) and blue shading.

<sup>a</sup> Population numbers were extracted from and percentages were calculated from: Table B B03002 – Hispanic or Latino Origin by Race. 2019 ACS 5-year Estimates Detailed Tables. U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates: <https://data.census.gov/cedsci/table?q=United%20States&d=ACS%205-Year%20Estimates%20Detailed%20Tables&tid=ACSDT5Y2020.B03002>. Accessed May 31, 2022.

<sup>b</sup> Number of households were extracted from and percent of households were calculated from: Table B17017 – Poverty Status in the Past 12 Months by Household Type and Age of Householder. 2019 ACS 5-Year Estimated Detailed Tables. U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates: <https://data.census.gov/cedsci/table?q=United%20States&d=ACS%205-Year%20Estimates%20Detailed%20Tables&tid=ACSDT5Y2020.B17017>. Accessed May 31, 2022.



**Figure 1.** Block Groups and Environmental Justice Communities within 1-mile radius of Chicopee River (Source: Staff).

*Environmental Justice Effects*

No entity provided comments or recommendations regarding the effects of the proposed amendment on environmental justice communities in response to the Commission’s public notice. As noted above, the proposed action does not require any construction-related nor ground disturbing activities and will have no impact on recreation. Further, the proposed action would be beneficial to shoreline and instream stability and would provide overall benefits for fishery and other aquatic resources along the entire length of the Chicopee River. In consideration of the included census data, and the limited scope of the amendment proposal, Commission staff conclude that this amendment proposal would result in no impacts on environmental justice communities and thus, impacts to environmental justice communities would not be disproportionately high and adverse.

## **VI. CONCLUSIONS AND RECOMMENDATIONS**

Based on our independent review of agency and public comments filed on this project and our review of the environmental effects of the proposed action, we find that the proposed ROR operation of these projects would be beneficial to aquatic and fishery resources and would benefit shoreline and instream stability at the projects. Further, the proposed action would have no effect on historic properties or threatened and endangered species at the projects nor would result in impacts on environmental justice communities. The proposed action would not constitute a major federal action significantly affecting the quality of the human environment.

## VII. LITERATURE CITED

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