

Kiryas Joel's Proposed Annexation of Unincorporated Land in the Town of Monroe

An Independent Assessment of the Circumstances Surrounding the Annexation

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Orange County

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Comments welcome: *CGR did not share this report with any groups outside Orange County prior to publication. Despite efforts to avoid them, these are complex issues and errors of omission or commission may remain. Please direct comments by email to Kent Gardner at kgardner@cgr.org. If substantive changes are recommended and accepted, CGR will consider issuing another version of the report.*

Summary

Background

On May 6, 2015, the Orange County Planning Department issued a Request for Qualifications seeking assistance with a “thorough and timely analysis” of the impacts of the annexation of unincorporated land from the Town of Monroe into the Village of Kiryas Joel. A joint response from the Center for Governmental Research and the Chazen Companies was submitted and accepted. George Rodenhausen, Esq., of Rodenhausen Chale LLP, joined the team to provide legal counsel.

Study Tasks

As articulated in the RFQ, assigned tasks included

Task 1 – Population, Land Use / Development, & Demographic Analysis of Annexation Proposals and Reasonable Alternatives

Task 2 – Analysis of Impacts to County Services and Programs

Task 3 – Analysis of Impacts to County Assets and Facilities

Task 4 – Assistance and Review – prior to submission of County Comments on Annexation Documents Referred by Village of Kiryas Joel and other involved and interested parties.

Kiryas Joel/Town of Monroe Annexation Study Advisory Committee

Orange County’s County Executive and Legislature appointed an Advisory Committee to oversee the study and receive its findings. Members of the Committee included

David Church, AICP, Commissioner of Planning – Chair

Wayne Booth, Deputy County Executive

Harry Porr, Director of Operations and Cost Control

Katie Bonelli, County Legislator

Michael Amo, County Legislator

Myma Kemnitz, County Legislator

Darcie Miller, LCSW-R, Commissioner of Social Services

Christopher Viebrock, PE, Commissioner of Public Works

Walter Koury, Commissioner of Emergency Services

John McCarey, Director of Real Property Services
Christopher Ericson, MPA, Deputy Commissioner of Health
Elaine McClung, member, Orange County Planning Board

Why is This Annexation Different?

The Village leadership and its supporters have asked why this annexation proposal warrants a costly study and rigorous regulatory scrutiny.

- **First**, the impact of the Village and its expansion is greater than that of other communities its size, partly because of “boomtown” nature of the pace of its growth, partly due to the unique economic characteristics of the members of the Hasidic community (and their impact on public services) and partly due to a persistent lack of engagement and consultation on the part of the Village leadership.
- **Second**, the Hasidic community is separate by choice and remains distinct from neighboring communities on a broad range of characteristics. The differences between the cultures are profound. These differences contribute to a level of suspicion and distrust on both sides that is corrosive and counter-productive. A clear and independent exploration of the facts will help establish a foundation of understanding and reduce the level of conflict.

Kiryas Joel’s Environmental & Fiscal Impact

Regulatory Engagement

The Orange County Planning Department is charged with the responsibility of overseeing and coordination actions by municipalities with environmental consequences. A lack of engagement by the Village government with the Planning Department makes it difficult for the County to meet some of its obligations in an efficient and effective manner. We consistently heard from County officials that it is difficult to determine when Village meetings about land use decisions occur or to secure minutes recording decisions made at these meetings. This, in turn, makes it difficult for the county to issue water permits, monitor sewer hookups and/or conduct analyses required under General Municipal Law (GML) §§239-m and 239-n, which is discussed in more detail below.

Limited Resources Strained

Like any urban community, residents of Kiryas Joel require a supporting infrastructure, particularly fresh water and wastewater treatment. The high density development coupled with the very fast pace of growth within the Village places a high premium on careful environmental management. The capacities of the sewer and water

infrastructure are at risk as the Village continues to grow, thus threatening to constrain growth elsewhere.

- As of 2014, the Village contributed about 17% of total wastewater flows to the Harriman Wastewater Treatment Facility (WWTF).
- The Kiryas Joel WWTF is expected to reach its capacity in 2020. This plant cannot be easily expanded.
- The Harriman WWTF will reach currently permitted (6.0 mgd) capacity in 2027 at which time the Kiryas Joel contribution to the flow will be about 35%. Once the proposed improvements are made at Harriman, the capacity is planned to increase to 9.0 mgd.
- The financial structure supporting both operating and capital construction is hardly transparent and may be inequitable; some further analysis (and possibly a change in how costs are shared) is warranted.

Fresh water supplies to the Village of Kiryas Joel are also constrained.

- Peak usage in August 2014 exceeded the permitted capacity of the Village wells, with the difference partially made up from five water storage tanks.
- Additional wellfields owned by the Village—but not yet permitted—provide capacity sufficient to supply anticipated demand through 2023; the pipeline to the Catskill Aqueduct is very important beyond this point in time.
- Although the technical and regulatory issues regarding the Village's pipeline to the Aqueduct are complex and far from settled, the connection is likely to be granted a permit and construction completed. All required approvals have not been secured, however, and questions remain.

Fiscal Impact

The fiscal impact of the Village on other taxpayers is also apparent and a source of conflict between the two cultures.

Two characteristics of the Hasidic faith work together to limit the income of community residents. First, it assigns a far higher priority to religious over secular study, limiting the earning capacity of its adherents. Second, the community disapproves of birth control. As a consequence, large families divide low incomes.

The socioeconomic contrast with surrounding communities is stark. The median age in the Village of Kiryas Joel is 12; in Orange County as a whole it is 37. The Census Bureau estimates that 60% of all Village residents have income below the federal poverty line. In the rest of Orange County, just 9% are in poverty. The list of cultural differences is long.

While some members of the Hasidic community are wealthy, most are not and many qualify for social welfare benefits that are funded by county, state and federal taxpayers. Many county taxpayers conclude that Satmar members are “poor by choice” and rely on others to finance their unique religious observance. This has become another source of resentment and a reason for some to oppose Kiryas Joel’s expansion. The story of Kiryas Joel’s fiscal impact on the larger community is complex.

When considering its fiscal impact on the county, note that the Village of Kiryas Joel’s population is 6% of that of Orange County. Were service utilization equal to 6%, it would imply that the community is consuming exactly its population share. In practice, this would rarely happen as every community is distinct and brings its own set of needs and contributions. Nonetheless, that 6% threshold serves as a starting point for the discussion of relative burden.

Consider:

- Village residents’ share of Medicaid, SNAP (food stamps), Family Health Plus, and the Heating Assistance Program (HEAP) is well above the Village’s 6% share of the population.
- By contrast, Kiryas Joel’s use of Medicaid for the disabled (the largest share of Medicaid spending in Orange County) is half its population share.
- Use of cash assistance programs among the Hasidic community is near zero as adult recipients have a work requirement. Most mothers remain home with their children.
- Although Kiryas Joel’s residents are 21% of the county’s Medicaid recipients, the age profile of its residents suggests a spending share that is much lower—we estimate about 13%. While still double the population share, this is much lower than Kiryas Joel’s share of Medicaid beneficiaries would suggest.
- Village residents are disproportionate users of U.S. Department of Housing and Urban Development (HUD) housing vouchers: 32% of Section 8 vouchers countywide and 38% of Section 8 dollars flowing to Orange County benefit Kiryas Joel residents.
- The Hasidic community’s share of the cost of the Early Intervention program (for developmentally delayed children ages birth to 3) share of county cost is 17%.
- By contrast, the share of Pre-K Special Education (ages 3-5) dollars share is 7%, nearly equal to the Village population share. This is consistent with the community’s relatively low utilization of special education services among school aged children and with Medicaid Supplemental Security Income enrollment.
- The Kiryas Joel Union Free School District (KJUFSD) is a major recipient of federal Title funds—far higher than in the Monroe Woodbury Central School District

(MWCSD). Kiryas Joel's district receives nearly \$7 million v. \$1.3 million to MWCSD for a student population roughly the same size (measured by school-aged children living within the district).

- Yet if all children living in the Kiryas Joel district attended KJUFSD instead of private yeshivas, KJUFSD would receive upwards of \$100 million in state aid, possibly over \$150 million.
- Kiryas Joel's direct use of many other costly county services—Mental Health and substance abuse services, the Valley View Nursing Home, Orange County Community College and others—is low or zero.

Balance of Interests

State and federal statutes and legal precedents balance the inherent conflict between the rights of property owners to develop their land and the rights of proximate property owners to be protected from disproportionate impacts. This conflict is as old as the institution of private property: The freedom of owners to use property as they choose is not unlimited. Conversely, neighboring property owners are not protected from any change whatsoever to the *status quo*.

The rights of Orthodox Jewish landowners to develop their land in housing are no more nor less than the rights other landowners. The rest of the county has the right to ensure that this process of development is sustainable and is consistent with community standards, as reflected in environmental and land use law and precedent.

Findings

Disagreements about the facts contribute to the atmosphere of distrust. We have attempted to resolve these disagreements to the best of our abilities, given the information at our disposal. CGR and the Chazen Companies conducted many interviews covering a wide range of opinions and reviewed many documents (listed in the Appendix) to draw these conclusions:

- The likely trajectory of Kiryas Joel population growth is a matter of disagreement. Population growth forecasts for 2025 and beyond differ considerably. Our report reviews these forecasts in great detail and concludes that the estimated compound growth rate employed by Tim Miller Associates in the DGEIS is consistent with previous Village expansion (although slightly higher than the CGR forecast). We have employed the rate of growth implied in the DGEIS to project the Kiryas Joel population through 2040, for a total of about 96,000. This estimate is based principally on the natural growth of the existing population. The community's leadership is committed to enabling new family formation within the Village as young women reach childbearing age.

- The DGEIS forecast assumes modest in-migration. Kiryas Joel opponents correctly observe that in-migration from other Satmar population centers, particularly Williamsburg, Brooklyn, *could* be significant, limited only by housing capacity. It is this potential for explosive growth that feeds much of the fear within neighboring communities. The organic growth of the established residents is already difficult to accommodate and will necessitate access to additional sources of fresh water and expanded wastewater treatment capacity. It seems implausible that the current leadership of the Village would encourage in-migration given the very real challenges to its own organic growth.
- Were the Orthodox Jewish community to build residential housing on all land currently owned by the Village or affiliated owners outside the Village (but without annexation), the carrying capacity of these properties would be about 1,800 units under current zoning, accommodating something less than 6,000 additional residents. This falls short of the demand being generated by the existing population of Kiryas Joel between now and the end of the decade, depending on how much construction continues to occur within the Village proper.
- The annexation would allow Kiryas Joel the ability to “upzone” lands acquired, facilitating residential construction more easily than on properties owned outside the Town of Monroe. Rezoning within the Town of Monroe is more feasible politically as the Village residents are a large share of likely voters in the Town.
- The Hasidic community affirms that it has a religious obligation to provide housing for its organic growth. Yet it has a corresponding obligation to its neighbors to accommodate this growth in a manner that is consistent with the preservation of environmental quality and effectively mitigate the negative spillover consequences.
- Opponents of the annexation have asserted that increasing development density is not the intended purpose of New York’s annexation law. We disagree and find nothing in NYS General Municipal Law Article 17 (Municipal Annexation Law) or precedent to support this position. The only standard is that the annexation be in the “overall public interest.” Commenting on annexation, the National League of Cities notes that
*“the urbanized core city may seek to annex . . . the adjacent urbanizing fringe area in order to use resources efficiently, capture growth, gain a tax base or implement a plan across current borders. In some cases, annexation may precede urbanization as a means of capturing anticipated growth.”**

Annexation provides for orderly urban expansion, facilitating the extension of urban services like water and sewer to the urban fringe, and preventing costly suburban sprawl. Whether clearly acknowledged or not, the Hasidic community seeks to

* <http://www.nlc.org/build-skills-and-networks/resources/cities-101/city-powers/municipal-annexation>

annex unincorporated lands in the Town of Monroe for the purpose of building high density residential development, consistent with densities already found within the Village. This would require rezoning, although the zoning within the land identified as “The Fingers” is already near the density permitted in the Village.

- The key environmental constraints to continued residential growth are water quality and supply and sewage treatment capacity.
 - The current system for allocating costs for wastewater treatment is anything but transparent. Without hard measurement of flows it is difficult to determine who is paying what share of costs, and whether wastewater treatment costs are being fairly shared or not.
 - Kiryas Joel’s privately-owned chicken processing plant and meat market were found in violation of the Clean Water Act. The violations, which include discharging untreated wastewater into storm drains, are acknowledged in a consent decree entered into in 2014 as a result of a suit brought by the U.S. Attorney for the Southern District of New York and the Environmental Protection Agency. The Village leadership and the technical staff at Orange County Sewer District #1 should work together to ensure compliance with the consent decree.
 - Kiryas Joel’s impending water supply constraint is being addressed directly through its ongoing construction of a 24” pipeline connecting Kiryas Joel to the NYC aqueduct system, although Kiryas Joel does not yet have a permit from NYC. The construction of the pipeline has been pursued within the laws and regulations of NYS. Its completion would protect adjacent communities from the consequences of groundwater over-pumping once the pipeline is completed and is in use.
- Kiryas Joel does not comply with a NYS municipality’s obligation to refer a series of land use regulatory actions to the Orange County Planning Department as required under NYS General Municipal Law (GML) §239-m. The purpose of this provision is to, “bring pertinent inter-community and county-wide planning, zoning, site plan and subdivision considerations to the attention of neighboring municipalities....” and by so doing to facilitate regional review of land use proposals that may be of regional concern.” The bypassing of these referral requirements and recommendations lends credence to the claim that Kiryas Joel is operating outside the law.
- The Kiryas Joel Union Free School District and the Village of Kiryas Joel are coterminous. While we appreciate the many philosophical and legal questions this raises, the experience of the East Ramapo Central School District is instructive. The coterminous boundary is a practical solution to a very challenging conflict

between the unique instruction provided to Hasidic children and the provision of public education services outside the Village.

- Both the Orange County government and the Village of Kiryas Joel have spent substantial taxpayer dollars on outside counsel; \$1.9M for the County (0.05% of budget) and over \$2M for Kiryas Joel (2.5% of budget) over the past five years. These expenditures are consistent with the important and complicated legal context within which the municipalities operate, and the current relationship between Kiryas Joel and its neighbors. However, litigation is a reactive, high-risk/low-reward way for municipalities to practice governance on a regular basis. While all parties here have legitimate interests—supported by substantial bodies of law—there are no guaranteed outcomes through litigation.

Conclusions

Our Task

CGR and the Chazen Companies have devoted the past two months to conducting a wide range of interviews, reviewing many documents and analyzing demographic growth projections, service demand impacts of Kiryas Joel and the physical infrastructure limitations created by the Village of Kiryas Joel as it continues to grow. Our charge was to present the Orange County leadership with an independent assessment of these factors as it plans for the county's future.

Sustainable Growth is the Goal

Simple demographics, combined with deeply embedded cultural values and practices, suggests that new family formation among members of the Hasidic community will continue at its current rate with or without annexation. Constraints imposed by water supply and wastewater processing capacity, prevailing laws and the annexation decision itself as well as actions of neighboring communities will influence where these new families live.

Our build-out analysis presented above assesses the capacity of lands currently under the control of the Village or Orthodox Jewish landowners both inside and outside the Village. Higher densities within the annexation lands would reduce the pressure to increase density within the current Village boundaries or on the land owned by affiliated developers outside the Town of Monroe. Landowners willing to develop or sell land have well-established rights in their property that includes the ability to develop that property for housing—but within established legal limits. In addition, the leadership of the Hasidic community—like all communities—is entitled to pursue its internal obligation to provide housing for its current and anticipated future residents.

But these rights are not unlimited simply because this is a religious community. While it can choose to be set apart culturally, Kiryas Joel and the larger Orthodox Jewish community still must comply with laws passed by Orange County and the State of

New York that are intended to ensure that growth is sustainable and balances the interests of all of the region's residents.

Embracing Smart Growth

The DGEIS for annexation prepared earlier on behalf of the Village of Kiryas Joel argues that the annexation and the development pattern it reflects is a manifestation of "smart growth." Yet smart growth is more than the inverse of sprawl. Smart growth embraces regional cooperation and engagement along with full respect for environmental standards. The local control promised by NYS's Home Rule provisions has limits, particularly when environmental quality is **threatened**.

Kiryas Joel's expansion does not occur in a vacuum, nor should it occur without appropriate dialogue among the Village, its neighbors and Orange County. Many of the Village's neighbors make it abundantly clear that they prefer that the village not grow at all, a position that places them in direct conflict with cultural expectations and the municipality's plans. Instead of settling these matters in the courts, Orange County leaders would better serve taxpayers by working to establish a climate in which growth can occur with the cooperation of municipal, county, regional and state agencies.

Acknowledgements

CGR and Chazen has benefited from many hours of diligent effort by staff members drawn from many departments in Orange County, particularly David Church and Fred Budde of the Planning Department. Errors of estimation or interpretation remain our own, however.

Many others have been generous with their time. We are indebted to conversations with a number of county legislators, and other elected officials and staff from Orange County local governments, particularly the principals in the annexation decision, the Village of Kiryas Joel and the Town of Monroe. We have benefited from dialogue with United Monroe, other community leaders, and the large volume of written material that has been generated in response to this conflict. We also appreciate the productive dialogue we have had with Robert Fromaget concerning his demographic forecast.

Staff Team

CGR's internal team includes Paul Bishop, MPA, and Kirsten Barclay, J.D., Associate Principals, and Henry Druschel, Research Assistant. Paul took the lead on all issues related to public safety. Kirsten led the analysis of public schools and explored a number of legal questions. Henry provided overall support for data collection and analysis and took primary responsibility for the demographic forecast.

At the Chazen Companies, Mike Budris led analysis of water and wastewater issues with assistance from Robert Singer, Ph.D. and Rick Lederer- Barnes prepared buildout estimates.

George Rodenhausen, Partner in the law firm Rodenhausen Chale LLP, provided legal counsel.

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Demographic Analysis

Key to any analysis of the future impact of the rapidly-growing Kiryas Joel population is an assessment of that rate of growth. Several projections of Kiryas Joel's future population have been published in recent years, presenting a wide range of possible growth scenarios. As the ability of the Village and County to provide necessary services to the residents of Kiryas Joel depends in large part on the size of that community, assessing the validity of these projections and developing a range of plausible estimates is extremely important. This section assesses the existing population projections, documents their assumptions, and presents CGR's estimate of the Village's future population.

A Review of Extant Forecasts

Tim Miller Associates

Kiryas Joel's expected future growth is central to the discussion of impacts in the DGEIS, prepared by Tim Miller Associates. The Census Bureau's Population Estimates Program's estimate of Kiryas Joel's 2013 population is used as the base population figure. Each year's population growth is derived from the number of females graduating from Kiryas Joel schools two years prior, as it is a cultural expectation that young women will marry and start families at this point in their lives, but the exact mechanism by which those numbers determine growth is unclear. New family formation plus mortality and migration are cited as the main determinants of population increase. This projection generates a population estimate of 42,497 by 2025, an increase of 20,403 residents from 2013. If that rate of growth over 10 years is converted to a compounding annual rate and projected forward, the result is a forecasted Kiryas Joel population of 96,000 by 2040.

The DGEIS population forecast table follows.

Table E-3 Population Projection for Study Area Growth Based on Families Established from Existing Female Student Population									
Female students 2 years after graduation									12/18/2014
Year	UTA Girls	BNEI Girls	SHERI TORA Girls	Total number of Females	Average Family Size	Annual Population Growth*	Population*	Number of Housing units	Population Growth From Previous Year (%)
2013 Population Projection (US Census ACS)					5.9		21,894	3,716	
2014	116	40	29	185	2.0	740	22,634	4,086	3.4%
2015	110	30	28	168	2.5	831	23,466	4,419	3.7%
2016	153	56	46	255	2.9	836	24,301	4,706	3.6%
2017	204	68	36	308	3.9	1,196	25,497	5,012	4.9%
2018	201	38	66	305	4.9	1,488	26,984	5,316	5.8%
2019	221	45	54	320	5.9	1,879	28,864	5,635	7.0%
2020	236	45	64	345	5.9	2,026	30,890	5,978	7.0%
2021	235	41	74	350	5.9	2,055	32,945	6,326	6.7%
2022	251	55	77	383	5.9	2,232	35,177	6,705	6.8%
2023	272	45	64	381	5.9	2,255	37,432	7,087	6.4%
2024	279	59	77	415	5.9	2,437	39,870	7,500	6.5%
2025	267	58	90	415	5.9	2,427	42,297	7,911	6.1%
2015 to 2025	2,429	540	676	3,645		19,663			5.6%
* Adjusted for mortality and in-migration									Average
Population Growth 2015 to 2025*							19,663		
New Dwelling Units 2015 to 2025								3,825	

Sources:
 Village of Kiryas Joel, et. al. "Business Plan, Aqueduct Connection Project, Supplement I", December 2013. Appendix 58, "New York State Education Department Basic Education Data System Enrollment Summary."
 US Census 2010
 US Census, American Community Survey (ACS) Projections, 2013
 Projection to 2025 by Tim Miller Associates, Inc.

AKRF, Inc.

In 2009, Kiryas Joel engaged AKRF, Inc. to prepare a population growth study for their application to connect to the New York City Catskill Aqueduct. Their projection began with the female population of Kiryas Joel in 2000, broken down by age, and used 2000 Census Public Use Microdata Sample (PUMS) data to estimate the number of children born in the average Yiddish speaking household (as a proxy for Hasidic households) at approximately 6. As a result, they assumed women in Kiryas Joel would have a child every two years between the ages of 20 and 30. Mortality rates were estimated using data from the National Center for Health Statistics. Finally, annual in-migration was estimated using a combination of Census data and information collected by Kiryas Joel itself. The projection assumed an annual in-migration rate of 1.3 percent of the total Kiryas Joel population in 2000, decreasing by 0.02 percent annually, consistent with patterns observed in older Hasidic communities such as Williamsburg in Brooklyn.

With those assumptions, population was projected to increase from 13,138 in 2000 to 50,527 in 2030. If that growth is converted to an annual rate and extended to 2040,

the projected population is 79,163. The following table reproduces the AKRF yearly totals through 2030, and shows the extended projection for 2031 through 2040.

AKRF Demographic Forecast

2000	13,138						
2001	13,923	2011	22,120	2021	33,714	2031	<i>52,847</i>
2002	14,605	2012	23,088	2022	35,203	2032	<i>55,274</i>
2003	15,296	2013	24,099	2023	36,759	2033	<i>57,813</i>
2004	16,051	2014	25,128	2024	38,424	2034	<i>60,468</i>
2005	16,814	2015	26,200	2025	40,161	2035	<i>63,244</i>
2006	17,661	2016	27,334	2026	42,048	2036	<i>66,149</i>
2007	18,516	2017	28,510	2027	44,011	2037	<i>69,187</i>
2008	19,388	2018	29,731	2028	46,068	2038	<i>72,364</i>
2009	20,270	2019	30,994	2029	48,246	2039	<i>75,687</i>
2010	21,169	2020	32,302	2030	50,527	2040	<i>79,163</i>

Figures in italics (2031-2040) are extended from the original projection using the implied compound annual growth rate.

Robert Fromaget, Town of Blooming Grove

Projections

A higher set of projections were developed by the current supervisor of the Town of Blooming Grove, Robert Fromaget. In early 2013 (before he assumed his current position), Mr. Fromaget distributed a report titled "Orange County Sewer District: Population, Water Demand, Wastewater Projections, Assessment and Investigation."[†] Mr. Fromaget subsequently revised these figures.

A Different Starting Point: Adjusting the 2010 Census Total

Mr. Fromaget's key insight is his observation that 11% of total housing units were reported as vacant or unused in the 2010 Census. This is in contrast to the 2000 Census, when nearly every unit was reported as occupied. He states that this discrepancy "suggest[s] that the Kiryas Joel population was significantly understated in the 2010 U.S. Census," a conclusion addressed below. Mr. Fromaget developed alternate 2010 population figures by assuming that these vacant housing units were occupied. In the revision provided to CGR, his adjusted 2010 population is 24,414, 21% higher than the 2010 Census's figure of 20,175.

This assumption is consequential. Not only does this suggest a higher starting point in 2010, it also implies a higher annual growth rate from 2000 to 2010—which would be 6.39% if you accept his 2010 adjustment. From the 2000 starting point, a 6.39%

[†] <http://ocbgdems.com/files/OCSDProjectandAssess2013.pdf>

compound annual growth rate makes a vast difference by 2040. His current high estimate, then, is 155,137[‡].

Mr. Fromaget also notes that the higher growth rate (6.39%) coupled with the Census Bureau’s 2010 starting point would result in a 2040 population of 129,462.

The Census 2010 table identifying the vacant housing units (also reproduced in the DGEIS) follows.

Census 2010 Summary Profile		
150s 36071015003, 36071015004, 36071015005 et al. Geographies: 4 Census Tracts	Prepared by Thomas Shepstone for CPC	
Total Housing Units by Occupancy		
Total	4,297	100.0%
Occupied Housing Units	3,807	88.6%
Vacant Housing Units		
For Rent	63	1.5%
Rented, not Occupied	10	0.2%
For Sale Only	116	2.7%
Sold, not Occupied	153	3.6%
For Seasonal/Recreational/Occasional Use	105	2.4%
For Migrant Workers	0	0.0%
Other Vacant	43	1.0%
Total Vacancy Rate	11.4%	

The Accuracy of the 2010 Census

After reviewing other information, we conclude that the Census population figure reported for Kiryas Joel in 2010, thus the 4.35% compound annual growth rate from 2000, is probably correct. CGR compared the 2010 Census figure to the estimated Kiryas Joel population from the American Community Survey. The ACS is an ongoing program by the Census Bureau that collects responses to numerous questions throughout each year and annually issues an estimate covering a five-year period. There are several ACS population figures for Kiryas Joel of a period that encompasses 2010, and all are close to the reported 2010 Census figure.

American Community Survey 5 Year Population Estimates for Kiryas Joel					
Source	2006-10	2007-11 ACS	2008-12	2009-13 ACS	2010 Census
Total Pop.	19,089	19,566	20,176	20,734	20,175

Some have suggested that the 2010 Census figure represents strategic underreporting on the part of the Village leadership. It would be very difficult to influence the American Community Survey however, as surveys are sent out to randomly chosen

[‡] Robert Fromaget, personal communication, August 17, 2015.

households every month, and the reported figures are based on five years of data collection. The close agreement between the ACS and the 2010 Census figures makes the possibility of underreporting on the Census substantially more remote.

The response rate to the Census inside Kiryas Joel was well within acceptable bounds. The table below shows the mail response rates for Kiryas Joel, the town of Monroe, and Orange County at both the 2000 and 2010 Census.

Census Response Rate	2000 Census	2010 Census
Kiryas Joel	53%	61%
Monroe	69%	66%
Orange County	70%	70%

It is true that Kiryas Joel’s response rate is lower than Orange County’s and overall Town of Monroe’s. The cultural and linguistic barriers to data collection are likely to have had an impact. Other Hasidic communities had similar response rates, such as the Village of New Square in Rockland County (64%) and the census tracts making up the community of Borough Park in Kings County (an average of 51%).

CGR also studied the Orange County Real Property Department’s figures for the number of residential parcels, to see if there was any discrepancy between that record and the 2010 Census. The Census reported 3,666 occupied housing units of 4,126 total, while Orange County recorded 3,282. Were Kiryas Joel underreporting the number of occupied housing units to the Census, we would expect that figure to be lower than the County’s, not higher. The County’s rate increased steadily in the subsequent years, with no jumps or fluctuations that could potentially be evidence of misrepresentation.

CGR also examined New York State Department of Health (NYS DOH) birth records for the Village. Beginning in 2002, all new births were reported by municipalities based on the address of the mother (geocoded by DOH by municipality—not zip code). The following table shows all new births from 2002 through 2010 in Kiryas Joel.

Live Births in Kiryas Joel (NYS DOH)								
2002	2003	2004	2005	2006	2007	2008	2009	2010
608	603	640	657	748	772	795	739	814

Were the Census figures underreported, one would expect these figures to be higher than the populations of their corresponding age cohorts, but that is not the case. A total of 3,868 children were born in Kiryas Joel between 2006 and 2010, and those children would be between the ages of 0 and 4 at the 2010 Census. The 2010 Census, however, reported 4,609 children between the ages of 0 and 4, higher than the number of births. The same is true of children born between 2001 and 2005

(assuming births in 2001 were equal to births in 2002) and the 2010 Census's reported population between 5 and 9, 3,116 and 3,648 respectively. These discrepancies are consistent with moderate in-migration from elsewhere in Orange County, as discussed elsewhere in this memo, and are inconsistent with any suppression of the 2010 Census population figures, thereby providing further evidence in favor of the accuracy of the 2010 Census.

In summary, CGR examined several sources for any evidence of error in the 2010 Census and found none. The vacancy rate is higher than in 2000, yet the near zero vacancy rate in 2000 would appear to be the outlier, although it was comparable to other high-density Hasidic communities in New York, like Monsey (4% in 2000) or New Square (2%). The 11% vacancy rate in 2010 is the highest of other Hasidic communities at the time, however. Monsey reported 7% and Borough Park reported 9%.

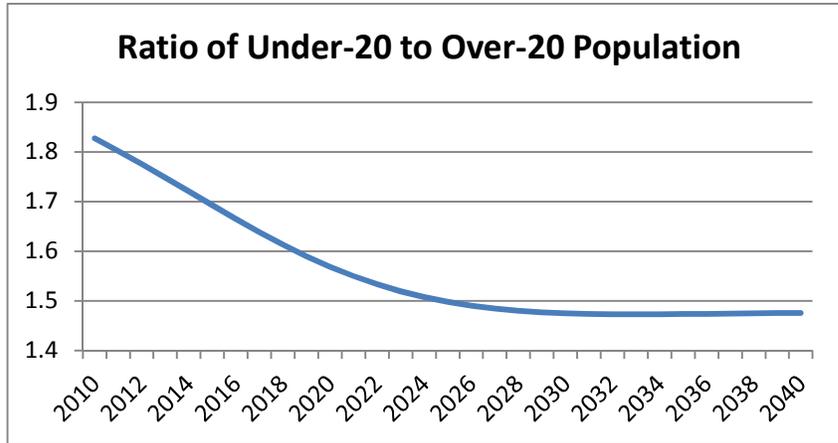
It would be a mistake to view the Census figures as perfectly accurate, but we find the reported 2010 figure to be a credible starting point.

CGR Forecast

CGR employed 2010 Census Bureau-reported gender and five-year age cohort (0 to 4, 5 to 9, etc.) tables as a starting point for our forecast. By aging 20% of every cohort into the following cohort each year and employing average fertility rates by female age (from the 2009-13 American Community Survey) we estimated total population by age cohort for each year. Each cohort is adjusted downward by the cohort mortality rate reported by the US Center for Disease Control and Prevention.

When this process is followed for each year, the result is an estimated Village population of 40,000 in 2025, doubling to 80,000 by 2040. Holding the ratio of adults to households constant (1.95 at the 2010 Census), we estimate about 17,000 households in 2040. Our forecast has the average age stabilizing by about 2028. As the average age of adults falls below current levels for the entire projection period, the average household size falls from the current 5.9 to about 4.8.

This does not suggest that the average family size in Kiryas Joel is decreasing, but rather that the demographic characteristics of the Village population are changing. As a larger share of adults will be older, they will no longer be living in the same home as most of their children. The ratio of children to adults falls until 2028, despite constant fertility rates.



Note that this projection does not take into account in-migration. The American Community Survey reports the number of people in a municipality who moved within the last year, broken down into those who moved from within the same county, from another county in the same state, from a different state, and from a different country. The most recent estimates cover 2009 through 2013, and shows that less than 1% of Kiryas Joel population moved from a different county in New York in the previous year, although a higher proportion moved from another location in Orange County into Kiryas Joel, possibly from the Town of Monroe. Those figures are consistent with each set of ACS estimates, which go back to 2006 through 2010.

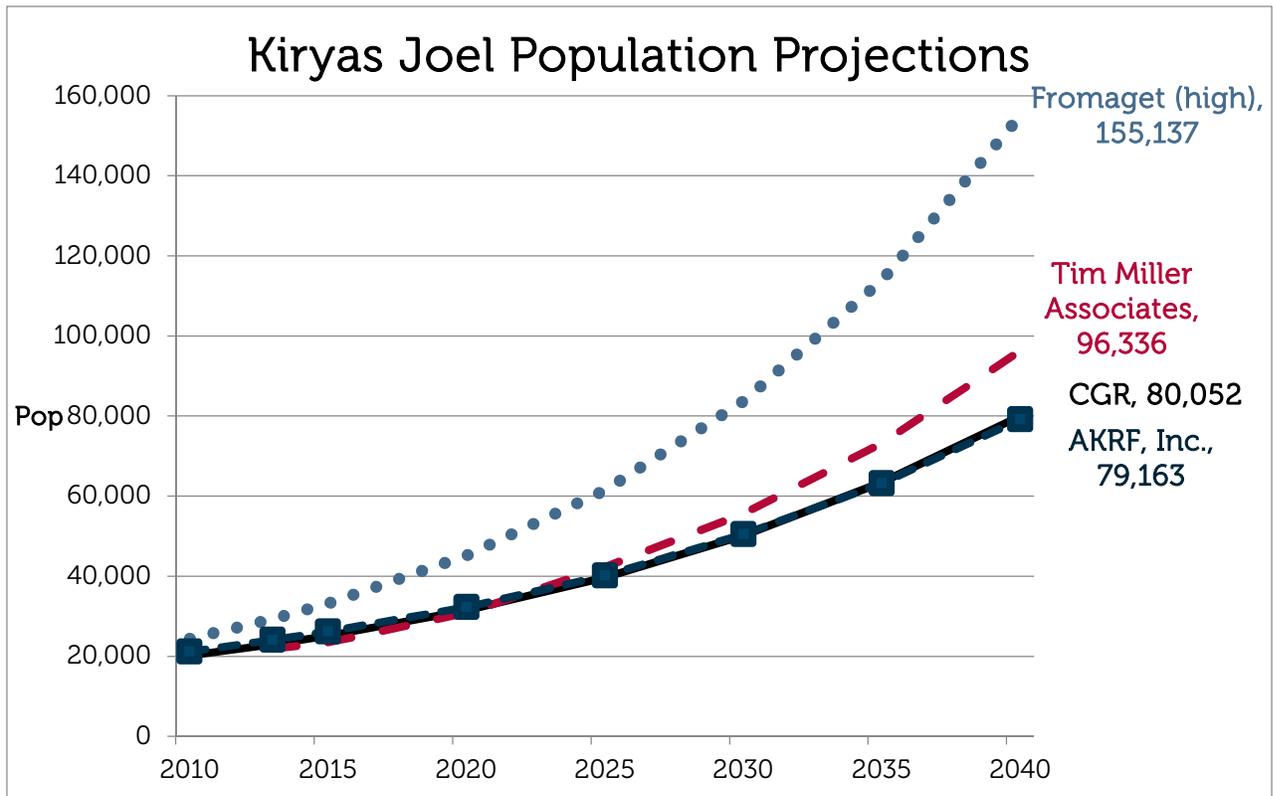
Conclusion

The assumptions behind the Tim Miller projection are not clearly stated, but it may reflect more accurate information about the current Village population. CGR’s projection, however, is very rigorous, and makes all assumptions and processes completely transparent.

The following table summarizes the above findings, presenting the source of each projection, their estimated populations for 2025 and 2040, and the assumptions made as a part of the projection. In the case of the Tim Miller projection, the 2040 figures are extrapolated from 2025 using the implicit compound annual growth rate. Estimated 2040 housing units are also shown in the table for the projections that included them. Following the table is a chart showing each projection.

Compilation of Demographic Forecasts

Source	2025 Population Forecast	2040 Population Forecast	Forecast Basis & Assumptions	2040 Housing Forecast
<i>Tim Miller Associates</i>	42,297	96,336 (est.)	Baseline: 2013 ACS population estimate Trend: Female graduates of KJ schools; actual fertility assumed not specified, unknown mortality/migration	20,344 (est.)
<i>AKRF, Inc.</i>	40,161	79,163 (est.)	Baseline: 2000 Census Trend: Average number of children for Yiddish speakers, NYS mortality	Not projected
<i>OC Planning</i>	34,715	61,574	Baseline: 2010 Census, unadjusted Trend: Five-year fertility rates for Yiddish speakers, NYS mortality	Not projected
<i>Fromaget (high)</i>	61,543	155,137	Adjusts 2010 Census up by 21%, CAGR=6.39%	26,282
<i>CGR</i>	39,703	80,052	Baseline: 2010 Census, unadjusted Trend: Annual fertility rates in Kiryas Joel, NYS mortality	16,612



The Potential for In-Migration

The preceding analysis focuses on the population currently living in the Village of Kiryas Joel. Many have expressed their belief that a large in-migration from Williamsburg, Brooklyn is inevitable or, at least, likely. There is little evidence of mass in-migration during the 2000s, however. The pace of housing construction required to satisfy the organic growth of the current residents is significant. Even more housing construction would be required to accommodate substantial in-migration.

Nonetheless, were the housing built and made available at prices favorable to the very expensive Brooklyn housing market, in-migration is possible. It is not susceptible to forecast, however, as we have no trend data on which to build.

Buildout Analysis

If growth of the population is inevitable, could this growth be accommodated without annexation? In order to explore this issue, the development potential of the proposed annexation area(s) and lands adjacent to the Village limits were examined. Utilizing GIS methods, local zoning standards as well as typical development constraints

(physical, regulatory and environmental) estimates of the number of residential units that could be constructed were prepared.

The development potential of three unique geographic areas was analyzed: the 507 acre annexation proposal, the 164 acre alternative, and a build-out of lands controlled by the Hasidic Jewish community adjacent or close proximity to the Village of Kiryas Joel (Village).

Lands Proximate to Kiryas Joel Controlled by Orthodox Jewish Community

An analysis of the development potential (buildout analysis) is provided to demonstrate alternatives to annexation as well as development potential for parcels controlled by the Orthodox Jewish community, surrounding the Village of Kiryas Joel. There are 515 tax parcels in the vicinity of Kiryas Joel located within the towns of Monroe and Blooming Grove, and within the villages of Woodbury and South Blooming Grove which are affiliated with the Orthodox Jewish community. This information was published and distributed by the Village of Kiryas Joel on a map prepared by AFR Engineering & Land Surveying, P.C. GIS Parcel data from 2013 was used for this analysis. Lands within the Village of Kiryas Joel were not included in the analysis.

Local Land Use Regulations and Permissible Development Densities

The subject parcels fall into eleven different zoning districts across the four municipalities. Allowable density ranges from one dwelling unit (DU) per three acres to five DUs per acre, with some district density dependent on availability of public sewer facilities. The town and village of Blooming Grove, as well as the Village of Woodbury, permissible development densities are based on developable acres (i.e. land without constraints). The Town of Monroe requires the removal of constrained lands (specifically slopes over 20%), for multi-unit housing in the UR-M district.

The density requirements for each municipality are summarized as follows:

Village of Woodbury

The lot area shall be determined as follows:

- Deduct from the gross lot area ..., state or federally designated wetlands, any land subject to flooding or ponding based on the twenty-five-year design storm inundation, public or utility rights-of-way, public utilities or lands otherwise

unsuitable for development as determined by the Planning Board based upon existence of natural or man-made features not to be disturbed.

- Deduct from the gross lot area as defined above the sum of:
 - Twenty percent of all lands classified as steep slopes (slopes with a topographical gradient equal or greater than 15% but less than 25%);
 - Fifty percent of all lands classified as very steep slopes (slopes with a topographical gradient equal or greater than 25%, but less than 35%); and
 - Eighty percent of all lands classified as excessively steep slopes (slopes with a topographical gradient greater than 35%).
- Calculate the remainder net lot area by subtracting [the] above from [lot size]; this land must equal or exceed the minimum lot area required in the zone. When two or more deductions overlap, the area shall be deducted from lot area once.
- In addition to the above, an area of at least 80% of the gross minimum lot area requirement in the applicable zone shall be contained in land with slopes of less than 15%. The Planning Board may permit a portion of this remaining area to contain easements and other areas deducted from the gross area ... above if it determines that these areas, which are frequently along the boundary lines of parcels, do not impact the ability of the lot to be properly developed.

Following the determination developable land the following are the allowed densities:

In **R-3A District**– minimum lot size is 3 acres, however on parcels of 10 acres or more gross density shall not exceed one unit per four acres.

In **R-2A District** – minimum lot size is 2 acres

Town of Monroe

In URM District – minimum lot size for single family residence is 40,000 square feet (SF) (10,000 SF w/ central sewer) and 5 acres for multi-dwelling group. It is assumed that development of multi-dwelling is the preferred development type, therefore all parcels greater than five acres were analyzed based on multi-dwelling development. Furthermore, a density of five units per acre was used as it is presumed that developed units would be larger than 2-bedroom units.

Specific regulation related to multiple dwelling groups in UR-M District:

- The maximum density in dwelling units per acre for multiple dwelling groups shall be 12 for efficiencies, 10 for one-bedroom units, eight for two-bedroom units and five for two bedroom- and-den or three-or-more-bedroom units.

- For senior citizen multiple dwelling groups, the densities in dwelling units per acre shall be 14 for efficiencies, 12 for one-bedroom and 10 for two-bedroom units.
- All units in excess of two bedrooms shall be limited to five dwellings per acre
- The following areas shall be deleted from the net lot area for density calculation of allowable dwelling units:
 - Slopes in excess of 20%.
- In RR-1.0 District – minimum lot size for single family is 40,000 SF, (25,000 SF w/ central sewer)
- In RR-1.5 District – minimum lot size for single family is 3 acres
- In SR-20 District – minimum lot size for single family is 40,000 SF, (20,000 SF w/ central sewer)

Town of Blooming Grove and Village of South Blooming Grove

RR District - Determination of Buildable Acreage. To determine the "buildable acreage," the applicant shall subtract the acreage of all lands classified as primary conservation area from the total site acreage. At this step, a preliminary lot count can be calculated at a density of one dwelling unit per 1.5 buildable acres.

The following constitute primary conservation areas:

- Wetlands;
- Areas of steep slopes (Areas with an average slope equal to or greater than 25% with a minimum area of 2,000 square feet and a minimum width perpendicular to the contour of 10 feet);
- Watercourses;
- Surface waterbodies;
- One-hundred-year floodplains;
- Cemeteries; and
- Designated critical environmental areas

A minimum of 50% of the total site area shall be permanently preserved as open space per the standards of § 235-14.1C, "Conservation areas." This open space may include primary or secondary conservation areas. The zoning allows up to 10% increase in base lot count for providing amenities, however for simplicity this was not included in the analysis. Overlay districts do not change the use and dimensional requirements of the underlying land use districts unless specifically stated.

Methodology

For the determination of possible dwelling units, under existing zoning conditions, the net available area for each lot, as defined by each municipality, was divided by the minimum lot size allowed and rounded down to whole numbers. If a lot already had development, that number was reduced by the number of existing units. For lots that would yield over five new units, the available land area was reduced by 20% (rounded to the nearest whole number) to account for development of roadways and utilities. The only parcels excluded from the analysis were those coded as being cemeteries.

In addition to residential development, commercial development was examined in the districts where residential is not a permitted use – specifically the LI and HI districts in the Town of Monroe and the ORI district in South Blooming Grove. A building area of 10% of the developable parcel area was used in the LI and ORI districts, and 15% in the HI district. While these percentages are lower than the maximum allowed in the districts, they are more in keeping with existing development trends in the area. The following table summarizes the build-out results. Existing units are based on parcel data.

Build-out Analysis Results for Land Outside Kiryas Joel, controlled by the Orthodox Jewish Community

Zoning	Number of Parcels	Acres	Existing Units	Developable Acres*	New Unit Potential	Reduction of 20%**	Existing SqFt	Potential SqFt
Blooming Grove – RR	1	181	-	154	102	82	-	-
Monroe - HI (with sewer)	13	229	3	179	-	-	121,200	1,006,406
Monroe - LI (with sewer)	4	58	-	55	-	-	66,000	180,844
Monroe - RR-1.0AC	3	4	2	4	1	1	-	-
Monroe - RR-1.0AC (with sewer)	89	146	62	137	141	115	-	-
Monroe - RR-3AC	8	107	6	99	28	24	-	-
Monroe - RR-3AC (with sewer)	24	99	18	77	11	9	-	-
Monroe - SR-20 (with sewer)	1	1	1	1	-	-	-	-
Monroe - UR-M (with sewer)	78	62	26	58	201	188	-	-
Monroe - UR-M over 5 acres	8	184	1	157	782	629	-	-
South Blooming Grove - ORI	2	39	2	37	-	-	-	159,432
South Blooming Grove - RR	12	985	1	905	597	488	-	-
South Blooming Grove - RR (with sewer)	13	9	12	9	2	2	-	-
Woodbury - R-2A	248	802	154	739	256	227	-	-
Woodbury - R-3A	11	231	-	91	27	27	-	-
Total	515	3,139	288	2,704	2,148	1,792	187,200	1,346,682

*Based on removal of wetlands, flood plains, and slopes (per each municipalities guidelines) ** Lots that yield a potential of over 5 units had their developable area reduced by 20% to account for likely infrastructure needs Note: Square footage is for commercial/industrial development in district which do not allow residential uses

Development was summarized by municipality as follows:

Build-out Analysis Results by Municipality

Municipality	Number of Parcels	Acres	Existing Units	Developable Acres*	New Unit Potential	Reduction of 20%**	Existing SqFt	Potential SqFt
Town of Blooming Grove	1	181	-	154	102	82	-	-
Village of South Blooming Grove	27	1,034	15	951	599	490	-	159,432
Town of Monroe	228	891	119	768	1,164	966	187,200	1,187,250
Village of Woodbury	259	1,033	154	831	283	254	-	-
Total	515	3,139	288	2,704	2,148	1,792	187,200	1,346,682

*Based on removal of wetlands, flood plains, and slopes (per each municipalities guidelines)

** Lots that yield a potential of over 5 units had their developable area reduced by 20% to account for likely infrastructure needs

Note: Square footage is for commercial/industrial development in district which do not allow residential uses

Under the current zoning scheme approximately 1,800 units are possible on the 515 parcels identified as controlled by the Orthodox Jewish community, outside of the Village of Kiryas Joel. This does not include potential accessory apartment dwelling units, which are permitted in the Town of Monroe. Including accessory apartments would add an approximate additional 960 one-to-two person dwelling units.

507 Acre Annexation Area

In preparing buildout estimates of the proposed annexation area, a more simplified approach was utilized. It is assumed that the lands proposed to be annexed would be zoned and developed at densities similar to the balance of the current Village. The DGEIS notes that much of the current residential development within the Village occurs with the use of a Planned Development District (PDD) designation. Minimum lot size and permissible densities vary widely. The DGEIS notes two recent multi-family developments (Atzei Tymurium Gardens and Beirach Moshe Gardens) which are cited as representative of typical developments. These achieved development densities of 19.3 and 12.1 dwelling units per acre, respectively. It is reasonable to assume that 15 dwelling units per acre (or higher) could be achieved on these lands.

Environmental constraints including wetlands, floodplains, and slopes over 20% were deducted from the total area available for development within the annexation boundary. Land areas listed below differ from the 509 acres because roads, the cemetery and other public ROWs were not included in the analysis. Developed parcels (such as a single home on a lot with additional development potential) were included, as those could be redeveloped at a higher density. The following table summarizes the calculated development potential within the proposed annexation area based on a range of possible development densities:

Annexation Area Development Potential

Number of Parcels	Acres	Existing Units	Developable Acres	Density (units/acre)	Unit Potential
174	467	96	407	5	2,033
				10	4,066
				15	6,100

If the full annexation area were developed at a density of 5 units per acre it would be similar to the overall build-out potential under existing zoning of lands controlled by the Village of Kiryas Joel and the greater Orthodox Jewish community. Up-zoning the annexation territory to higher densities may permit development at three times the predicted build-out under existing conditions.

164 Acre Annexation Alternative

The 164 acre alternative annexation area, as described in the DGEIS, was also evaluated. These areas are in the northeast area of the Town of Monroe, bordering the Village of Woodbury. Using the same criteria as the full annexation area, the following summarizes the development potential of the reduced annexation area:

Reduced Annexation Area Development Potential

Number of Parcels	Acres	Existing Units	Developable Acres	Density (units/acre)	Unit Potential
72	156	21	131	5	653
				10	1,307
				15	1,960

As this area is only about a third the size of the full annexation area, it is not surprising that the potential development is significantly lower than within the full annexation area. Even at 15 units per acre the potential development does not equal the amount of development calculated in the larger area build-out analysis.

Comparison of Estimates

DGEIS population estimates compared to build-out analyses in this study

	Total Land Area (Acres)	Average Density (DU/Acre)	Dwelling Units	Population Estimate
DGEIS estimate without Annexation	509	2.82	1,431	19,663
	Balance of Village	9.26	2,394	
DGEIS estimate with Annexation	509	7.5	3825	19,663
	Balance of Village	5.84	0	
Lands Controlled by Orthodox Jewish community outside Village	3,139	0.57	1792	9,139 ¹
Annexation Area	509	15	6100	31,100 ²
Alternate Annexation Area	164	15	1960	9,996

¹Does not include population growth within the Village of Kiryas Joel

²This is a maximum, and assumes completely residential development – likely there would be other types of development, which would lower this number.

The DGEIS proposes that 3,825 new dwelling units are needed to accommodate a new population of 19,663 persons by 2025. It stipulates that without annexation this development would be divided between the 509 acres annexation territory (1,431 Dwelling Units (DU)) under the current zoning scheme and within the existing Village boundaries (2,394 DU).

The DGEIS may overestimate the population that could be accommodated in the annexation area under existing zoning in two ways. First, according to the existing zoning, multi-family development within the UR-M district has a maximum density of 5 units per acre if the units developed have three bedrooms or more, which is the likely desired size, given the average family size in the Orthodox Jewish community. However, the DGEIS uses densities of 8.712 and 10.0 units per acre, which would only be possible with one-bedroom units, and thus unlikely to be able to accommodate the 5.1 person per household used in the population projects. Also the DGEIS assumes an accessory apartment would be built with every single-family unit. The purpose of the accessory apartment is to have a single individual, or couple, live on the same

property. The accessory apartment, as described in the zoning, should not be able to accommodate 5.1 persons.

The analysis demonstrates:

- There is significant development potential on lands controlled by the Orthodox Jewish community (including, but not limited to, the annexation territory) that could accommodate about 1,800 new dwelling units (excluding accessory apartments) under the current zoning regulations, perhaps housing approximately 9,000 people.
- The proposed 509 acre annexation territory could accommodate a much larger population (31,100) if developed at densities currently achieved by recent development proposals. However, given the need for community services, in particular schools and commercial entities, it is unlikely that the entire area would be developed exclusively as residential units.
- The smaller (164 area) alternative could accommodate nearly 10,000 persons if developed at 15 DU/Acre.
- Under any of the scenarios examined, additional development could occur within current Village limits.

Alternate Growth Scenario

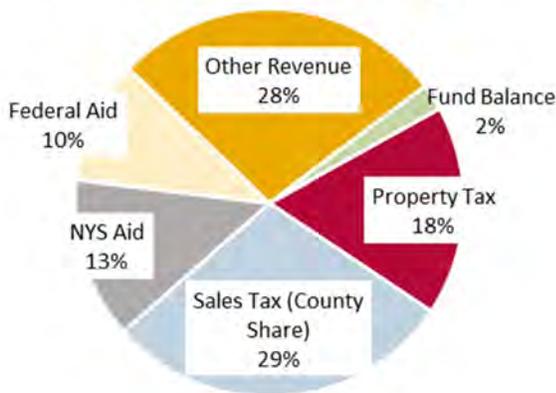
One alternative to annexation would be to allow for more focused growth surrounding the Village of Kiryas Joel. As demonstrated in the build-out analysis, there is the potential to accommodate approximately half of the projected population growth estimates within lands controlled by the Orthodox Jewish community. However, this area is very spread out, and would lead to potential fragmentation of the landscape, and potentially put strain on the local transportation network. The municipalities involved could consider allowing for a transfer of the development densities to those parcels closest to Kiryas Joel. Since the lands are under common or similar ownership it is reasonable to expect that transfer of allowed density would not be objectionable to those "giving up" development rights. Under this scenario parcels surrounding the Village of Kiryas Joel could be designated as "receiving zones" while parcels further out, but still controlled by the Orthodox Jewish community, would be considered "sending zones." Using this transfer of development density, the same number of units that could be developed under the existing zoning would still be possible, but they would be concentrated around the Village.

Public Service Provision in Orange County: Current & Prospective Use by KJ Residents

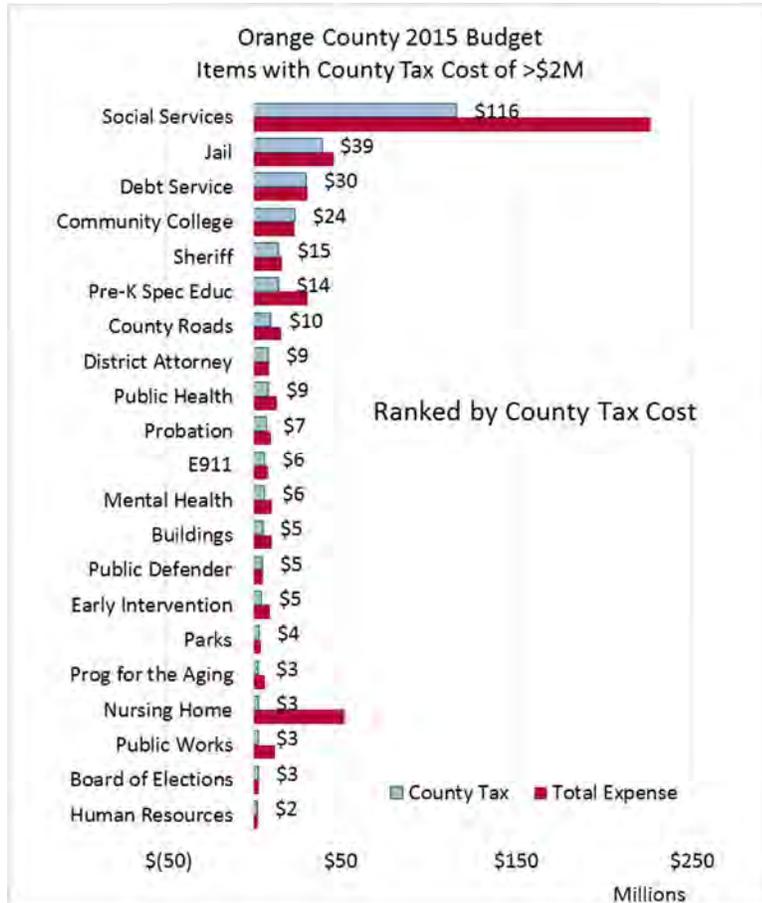
Overview of Orange County Budget

County government plays a more significant role in the provision of public services in New York than in most states. Both the state and federal governments create obligations for counties through direct mandates, many partially or wholly funded by intergovernmental grants. Other county services are deemed "optional" but are encouraged by higher levels of government through incentive funding.

Orange County 2015 Budget



Across the entire budget, county taxpayers bear about half of the burden of county services. The sales and property taxes are the principal vehicles by which the county funds its share of these expenditures. The "other revenue" category includes a variety of user fees and service charges. As an example, the cost of operating Orange County Sewer District #1 appears in the county budget but the costs are fully covered by specific taxes on users.



This chart shows that the total county tax cost of all county expenses expected to exceed \$2 million in 2015, as reflected in the budget adopted by the County Legislature. Sorted by county tax cost, the largest county expense is social services. The county tax cost is \$116 million with the total cost, after state and federal aid is included, at \$226 million. The total cost of the Valley View Nursing Home is the second largest expenditure at \$52 million, although just \$3 million of that total is paid by county taxpayers.

In the context of the proposed annexation, county taxpayers and legislators have a legitimate interest in the fiscal impact of the annexation on the county, thus the future county tax burden.

Annexation opponents argue that the annexation will facilitate more rapid growth of the population of Kiryas Joel and that residents of the Village consume a disproportionate share of county service spending.

The Village leadership counters that while its residents' utilization of some services, e.g. Medicaid, may be higher than that of other municipalities, other county services, e.g. the community college, serve few members of the Hasidic community.

Fiscal impact is one factor to be considered when determining whether an annexation petition is in the "overall public interest." The CGR/Chazen team attempts below to estimate the cost of KJ utilization of various Orange County services. In some instances we attempt to forecast the impact annexation will have on future service costs, but have generally attempted only to develop a factual basis for the differential impact of the Hasidic community and other Orange County residents in the present.

The fiscal relationship between residents of the Village of Kiryas Joel and Orange County's other taxpayers is complex. Although the utilization of some services by Orange County's Hasidic residents is high, the community's unique culture and preference for isolation has the opposite result for many other services.

We do not attempt to tally costs and benefits comprehensively. First, such a practice is contrary to any concept of community and is divisive. That said, the rapid expansion of the Hasidic population has made the costs they do or don't impose on the county a frequent topic of discussion. In our view, beliefs on both sides of this conflict are distorted. An independent and fair-minded review was warranted and we commend the County Executive for engaging this study.

The second reason to avoid a comprehensive summary is practical. Many services provided by government are only indirectly "used" by individuals. Called "public goods" by economists, public safety is the archetype of these services. Public order is only apparent in its absence, yet all benefit. Counties spend significant sums on emergency preparedness and stand ready to help all in need when severe storms or other calamities strike. Yet no individual directly benefits from emergency service preparation in the absence of an emergency.

Finally, even when services are largely provided to individuals, many public services are provided to all comers without the kind of personal identification that would permit tallying users. That said, we do our best to shed light on the fiscal implications for all taxpayers—county, state and federal—of an expansion of the Hasidic population in Orange County.

Social Services

Social Service Costs Shared

Nearly a quarter of the county budget (23%) supports social services. Moreover, the county is only responsible for a portion of the total cost of social services. The largest expenditure is for Medicaid, a program of medical services provided to persons in poverty, the elderly and the disabled. Administration and funding have always been shared between the federal government and the states. New York State historically shifted a portion of the burden of Medicaid onto the counties. For many decades, the distribution of cost was 50% federal with the remainder split between the state and the counties. Beginning in 2006, however, the county share was capped.

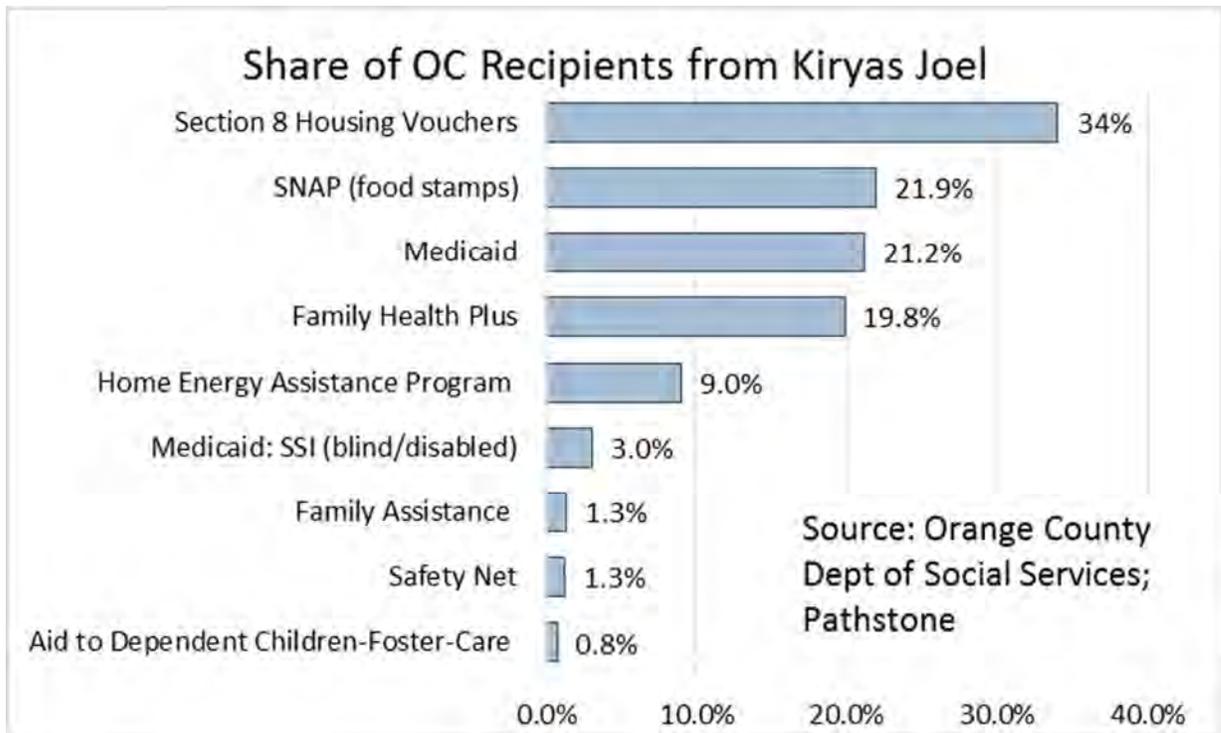
New York State Department of Health reports that the total cost of Medicaid in Orange County in 2014 was about \$700 million. About 73,000 Orange County residents were Medicaid beneficiaries (out of a population of 374,000).

Supplemental Nutrition Assistance Program (SNAP), commonly referred to as "food stamps" also makes a significant contribution to persons living in poverty. In 2014, 59,444 residents of Orange County received SNAP benefits for a total cost of \$75 million, all of which is paid by the federal government and administered by Orange County.

Kiryas Joel Utilization of Orange County Social Services

The Census Bureau estimates that the per capita income of Kiryas Joel residents was \$7,203 in the 2009-13 period and that 61% of individuals and 63% of children had income below the federal poverty line. In the rest of Orange County, 9% of individuals and 13% of children were in poverty.

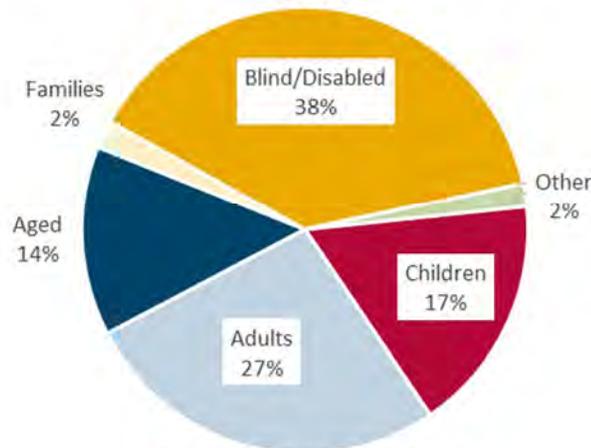
As a consequence, Kiryas Joel residents are significant users of many, but not all, public welfare programs. Utilization of cash assistance programs is low. "In-kind services," however, are well used. The share of Kiryas Joel residents using specific services is illustrated in the chart below. By share of individuals served, Kiryas Joel utilization exceeds the Village's population share (6%) for SNAP, Medicaid and Home Energy Assistance (HEAP). It is notable that Kiryas Joel residents' utilization of Medicaid for the disabled is half their population share, a point discussed again below.



In most cases, it is reasonable to assume that Hasidic consumers of these programs are no more or less costly than their shares suggest. As an example, although SNAP allotments vary with income, the variation per recipient is not nearly as great as Medicaid, thus the share of individuals receiving benefits is a reasonable estimate of their share of total expenditures.

Medicaid is different, however, as different populations make very different financial demands on the Medicaid program.

Orange County Medicaid Expenditure Shares
2014



Source: NYS Dept of Health

Blind/Disabled

As reflected in the pie chart above, the largest share of expenditure for Orange County Medicaid goes to individuals who are blind or disabled. Spending per blind/disabled recipient was about \$31,000 in 2014. Only 3% of Kiryas Joel residents receive this form of Medicaid, roughly half the Village population share.

Age Profile: Kiryas Joel Medicaid Recipient

The Census Bureau estimates the demographic profile of individuals in poverty in Orange County and Kiryas Joel. The population of Kiryas Joel is quite young—the median age is 12, compared to 37 for Orange County as a whole. The Census Bureau poverty estimates suggest that only a handful of Kiryas Joel Medicaid recipients are elderly. Moreover, we know from our discussion with the Valley View Nursing Home that they house no Kiryas Joel residents. Historically, 80% or more of the nursing home’s residents have been Medicaid recipients.

With a lower-than-expected share of disabled recipients and few elderly, the current impact of Kiryas Joel on the Medicaid budgets of Orange County, the state and federal governments is probably less than the proportion of recipients (21.2%) would suggest. We were not able to obtain Medicaid expenditure by residency of the recipient but were able to explore the question using data from NYS Department of Health.

	Orange County (excluding KJ)	Kiryas Joel
Under 18 years	13%	65%
18 to 64 years	8%	35%
65 years and over	7%	0.5%

In 2014, the average Medicaid claim per child in Orange County was \$3,551; per adult, \$7,846; and for the aged, \$36,964 (NYS Department of Health). Consistent with the age distribution in the Village, the Census reports that the age distribution of persons in poverty in

Kiryas Joel also skews young. See the adjacent table. By applying the expenditure per recipient for children, adults and the aged to the distribution of ages likely present among Kiryas Joel’s Medicaid recipient population, we estimate that the share of Medicaid expenditure on behalf of Kiryas Joel residents is about 13%. This is still twice the Village population share—and a very significant expenditure for all three payers—but substantially below the share of recipients, 21%.

Public Housing

The federal Department of Housing and Urban Development’s housing choice voucher program (often referred to as “Section 8” housing or HUD voucher) provides financial aid to families or individuals in poverty to rent housing in the private market. There are a limited number of housing vouchers available at any time; there is typically a long waiting list.

The housing voucher is obtained from a public housing agency. In Orange County, Pathstone is the public housing agency in charge of the voucher program[§].

The residents of Kiryas Joel are heavy users of the housing voucher program. Of 2,376 total housing vouchers currently being used in Orange County, Kiryas Joel residents use 842 (34%) and receive the benefit of 38% of the funds expended. Kiryas Joel residents are 16% of the waiting list—597 individuals.

Health

The Orange County Department of Health (OCDH) administers numerous public health programs and services through seven major divisions each with multiple funding structures.** While there are a multitude of programs and services administered and provided by the OCDH, the two most expensive services for the County are Early Intervention and Pre-K Special Education, both of which will be likely

[§] CGR is indebted to the Orange County office of Pathstone for its diligent analysis of Kiryas Joel’s use of housing vouchers.

** All of the baseline information in this section was provided to CGR by the Orange County Department of Health, although the analysis and interpretation is CGR’s responsibility. To the extent available, child-related data was cross-referenced with data from the New York State Education Department.

to expand as the Hasidic Jewish community grows. The majority of the OCDH's remaining programs are not utilized by members of the Kiryas Joel community.

Early Intervention Services: Birth to 3 years

The Intervention Services Division administers the Early Intervention program (EI) which provides education, services and training to children from birth through three years with developmental delays and their families in the home whenever possible. Services include, but are not limited to, speech and language therapy, occupational and physical therapy, special education and social work services, and health and nutrition support. In FY14, the average per child cost of EI services was \$4,500 and 17% of all children receiving EI in Orange County resided in Kiryas Joel. The County share of these services is 51%; thus the cost to the County of providing EI services for children residing in Kiryas Joel was \$0.87 million. As Kiryas Joel represents about 6% of the total county population, the Village share of EI services is nearly three times the population share.

Early Intervention

	County		Program Cost (\$m)	Cost per Child	KJ Cost (\$m)	OC Cost Share	OC	
	Total Children	KJ Children					Cost for KJ (\$m)	KJ Share of OC EI Spending
2013	2090	328	\$9.44	\$4,517	\$1.48	51%	\$0.75	16%
2014	2245	381	\$10.03	\$4,466	\$1.70	51%	\$0.87	17%

Pre-school Special Education: 3-5 years old

Preschool Special Education (pre-K SPED) services and programs are also provided by the County. These are specialized services for children from ages 3-5 who have a disability that adversely impacts their learning. In order for a child to receive pre-K sped services, a school district's Committee on Pre-School Special Education evaluates and recommends, via an Individualized Education Plan, programs and services specially designed to meet the child's individual needs. In addition to pre-K programs, children can receive speech and language, occupation, and physical therapy as well as special education and counseling, among other services. In FY14, the per child cost of pre-K SPED was \$15,900, and about 7% of all children receiving Pre-K in Orange County resided in Kiryas Joel, close to the Village's population share. The County's cost for Kiryas Joel's use of this program is about \$0.88 million.

Pre-K Special Education

	County Total Children	KJ Children	Progra m Cost (\$m)	Cost per Child	KJ Cost (\$m)	OC Cost Share	OC Cost for KJ (\$m)	KJ Share of OC PreK SPED Spending
2013-14	1,920	119	\$29.18	\$15,200	\$1.81	48%	\$0.87	6%
2014-15	1,888	133	\$29.97	\$15,874	\$2.11	42%	\$0.88	7%

Other OCDH Services

Other OCDH services and programs that are used by the Village include those administered by the Department of Health’s Environmental Health Division. This Division is responsible for plan reviews of residential subdivisions, food service establishments (including school food services), children’s camps, individual sewage disposal systems, public swimming facilities, and public water supply improvements.

- The Division’s largest program is water, and accounts for 34% of its staff time. It monitors 488 water supplies throughout the County, which includes monthly sampling and annual inspections. The findings often establish the basis for major improvements. Given the importance of fresh water to the expansion of the Village population, this is an important service to Kiryas Joel’s residents.
- Of the 2,000 food service operations regulated by the Division, only six are located in the Village. Food services uses 27% of the Division’s staff time.
- Aside from water and sewer, there are 28 entities used by the Kiryas Joel community that are regulated via inspection and permit by the Division, and the majority of those are schools’ food services. These important services support the continued health and safety of Kiryas Joel’s children.

Other departments that provide services to the Village include the Public Health Nursing Division which is charged with disease prevention and control services, particularly with respect to communicable diseases. The Office of Public Health Emergency Response monitors and responds to disease outbreak within the county. There is nothing in our findings that suggests these services are accessed at a rate higher than that of the county as a whole.

Other County Services

CGR contacted most of the county's departments to determine the extent to which they serve the county's Hasidic residents. Some administrators were able to share numerical estimates. In other cases, we asked for their best professional judgment.

- The Department of Mental Health, with a county budget of \$11 million, reports that Village residents make up a small share of mental health services in Orange County. Most services are provided in Rockland County at Bikur Cholim and at Good Samaritan Hospital. Some school satellite clinics from Bikur Cholim and the Federal Qualified Health Care Center in KJ has developed some capacity for mental health treatment.
- The Probation Department, with an annual budget of about \$10 million, handles approximately 3,500 cases annually. The department estimates that no more than 10 of these cases involve residents of Kiryas Joel.
- With an annual budget of \$45 million, the Orange County Jail is part of the public safety infrastructure that serves to protect all residents. A recent news article notes that a current inmate of the jail was arrested during an attempted burglary in Kiryas Joel.

As many criminal justice matters among members of the Hasidic community are handled by rabbinical courts, few Kiryas Joel residents are themselves the subject of arrest, prosecution and/or imprisonment. Although the average daily population in the jail over the span of a year is nearly 600, the jail administration estimates that the number of inmates from Kiryas Joel in a year is one or two.

- Legal Aid has an annual budget of about \$3 million but provides no assistance to Kiryas Joel residents.
- Family Court: Of 12,000 petitions and cases annually, approximately 200 of those—less than 2%—have originated from residents of Kiryas Joel.
- Valley View Nursing Home: Supported with a \$3 million county taxpayer subsidy, the Home has 360 beds, filled at 92% occupancy on average in the past year, with no Kiryas Joel residents.
- The county's Employment & Training office serves about 10,000 Orange County residents annually across their offices, and virtually none are from Kiryas Joel.
- With an annual budget of \$6.5 million, the Office for the Aging served 14,000 individual seniors in Orange County for a total of 259,601 instances in the last year. Kiryas Joel residents made up 78 of those seniors and 5,834 of those instances, about 2%.

- Youth Bureau, budgeted at \$1.2 million, served 5,856 youth in 2014, including 220 Kiryas Joel youth, about 4% of the total.
- Kiryas Joel is the only Orange County municipality not in either the CDBG Consortium or the HOME Consortium
- The Orange County Partnership (IDA) reports completing no economic development inducements in Kiryas Joel in at least the last 10 years, although there was a discussion with KJ Poultry Processing that did not lead to an inducement.
- With a county contribution of \$18 million, the Orange County Community College served approximately 5,000 county residents in 2014 at Orange County Community College, in addition to paying about \$6 million in tuition for other county residents to attend community college in other counties. None of these students came from Kiryas Joel.

Public Infrastructure

Water Supply

Existing Water Supply

The existing water supply for the Village of Kiryas Joel includes ten wells located in the Village of Kiryas Joel (Kiryas Joel Wellfield) from which a maximum of 1,268,650 gallons may be pumped per day, with an average limit of 1,000,000 gallons per day (1 mgd). An additional wellfield of seven wells located in the Brenner wellfield just south of the Village boundary provides another 928,800 gallons per day. The current allowed limit on pumping from all of these groundwater wells is 1.928 mgd.

The NYSDEC water supply permits that allow the utilization of these wells have a number of conditions. Most of these are routine, such as the posting of signage to identify the wellfields and restrictions on surface uses to avoid contamination of the wells, notifications to NYSDEC of any proposed changes, and submission of samples to the NYSDOH for testing. The water supply permits limit the amount of water that can be extracted from each well. Other conditions include:

- Requirement for the Village to provide water to private well owners whose wells become depleted by the pumping of the Village wells;
- Implementation of water conservation measures including meter replacements, leak detection programs, distribution of water conservation kits, and construction inspections;
- Submission of reports on water levels and conditions at the wellfields;

- Erosion control measures for the protection of wetlands;
- Establishment of a backup water supply equal to the pumping rate of the largest source.

The total system includes the 17 wells described above, two pumping stations, five water storage tanks, and three water treatment plants. The storage tanks maintain pressure in the system, provide water during peak demand periods, and provide water and pressure for fire protection services. Recharge of the wells is provided from the porous nature of the limestone rocks. For Well 28 in the Brenner wellfield, recharge is from the sand and gravel that is connected hydraulically to the Ramapo River.

In addition to serving the Village, water also is provided to some new subdivisions in the proposed annexation area just outside the Village. These new subdivisions are the Vintage Vista (28 lots) and the Forest Edge (55 lots) developments.

The whole water supply district used an average of 1.49 million gallons per day (mgd) in 2014, according to the Draft GEIS, or 66 gallons per person per day (gpd). The 66 gpd figure has been verified by Orange County Department of Health (Lee Berger PE) based on the Village water reports to NYSDEC. This includes all uses, including residential and commercial uses. The reported use of 66 gpd by the Village of Kiryas Joel is below the national average of 81 gpd and the average in New York State of 79 gpd^{††}, but there is a great deal of variability around this average. Typically water use is driven by agricultural uses and industrial uses, which are minor demands in the Village of Kiryas Joel. Average per capita use by residents of New York City is 127 gpd, as discussed below in the section on the Catskill Aqueduct withdrawal. The average water use in water districts in Orange County was 118 gpd in 2010, with only 62 gpd for communities and individual wells. [#] According to 2014 Annual Water Quality Reports, per capita water usage in the Village of Monroe was approximately 100 gpd, and approximately 64 gpd in the City of Newburgh (a municipality in Orange County with a relatively high density of development).

The current (2014) peak usage as reported to NYSDEC and described in the Draft GEIS is 2.22 mgd. The Kiryas Joel wellfield and the Brenner wellfield have a combined capacity of 2.28 mgd, which just meets the current peak demand. However, the existing permit limit for all withdrawals is 1.93 mgd. The withdrawals exceeded the

^{††} Table 6 in USGS. 2011. Estimated Use of Water in the United States in 2010.

<http://pubs.usgs.gov/circ/1405/pdf/circ1405.pdf>

[#] Orange County, NY. 2010. Final Draft Water Master Plan

http://www.orangecountygov.com/filestorage/124/1362/1460/4304/Supplement_2_Water_Master_Plan.pdf

permitted limits in August of 2014. The difference on peak days is partially made up from five water storage tanks that can supply up to 4.1 mgd.

Rates for water are \$3.75/1,000 gallons for residential customers and \$5.50/1,000 gallons for commercial and industrial users.

New Water Supplies

The Village has sought additional water supplies, and has requested a consolidated permit from NYSDEC (DEC Application No: 3-3399-00065/00001) for all the existing wells and from three other wellfields: Star Mountain (1.50 mgd) in the Town of Cornwall, Woodbury Heights Estates (0.29 – 0.32 mgd) in the Village of Woodbury, and the Mountainville wellfields (0.61 mgd). These sources are not yet permitted.

The Star Mountain wellfield would be accessed by the proposed pipeline to the Catskill Aqueduct. The Woodbury Heights wellfield was purchased by the Village of Kiryas Joel in 2014. This groundwater source provides part of the backup capacity for the Catskill Aqueduct connection and could serve subdivisions outside the Village limit and inside the annexation area. All these sources total 4.33 – 4.36 mgd.

The consolidated permit application requests a temporary use of groundwater sources of 2.54 mgd until March 31, 2015. This approval has been delayed and the 2.54 mgd withdrawal has not been approved and is pending final approval by NYSDEC of the Mountainville wellfield. Together, these sources offer a potential to expand to up to 4.36 mgd. The existing and proposed groundwater sources for the Village of Kiryas Joel are summarized in the table following.

Existing and potential wellfield yields for the Village of Kiryas Joel (Source: Table 3.5-1, draft GEIS)	
Wellfield	Wellfield Yields (million gallons per day)
Existing Village and Brenner wellfields	1.93 (permitted limit)
Proposed Mountainville Wellfield	0.61
Star Mountain Wellfield	1.50
Woodbury Heights Estates Wellfield	0.29 to 0.32
Total Potential	4.33 to 4.36

The table below estimates the daily demand based on the population growth information provided in the draft GEIS (and extrapolated by CGR beyond 2025) and the existing per capita use of 66 gallons per person per day. It shows that the projected demand will exceed the anticipated supply by 2034.

Projected water demands for the Village of Kiryas Joel and the proposed Annexation Area.			
Year	Population (1000s)	Housing Units (1000s)	Average daily demand (million gallons @ 66 gpd)
2013	21.9	3.7	1.45
2014	22.6	4.1	1.49
2015	23.5	4.4	1.55
2016	24.3	4.7	1.60
2017	25.5	5.0	1.68
2018	27.0	5.3	1.78
2019	28.9	5.6	1.91
2020	30.9	6.0	2.04
2021	32.9	6.3	2.17
2022	35.2	6.7	2.32
2023	37.4	7.1	2.47
2024	39.9	7.5	2.63
2025	42.3	7.9	2.79
2026	44.7	8.4	2.95
2027	47.2	9.0	3.12
2028	49.9	9.6	3.29
2029	52.7	10.2	3.48
2030	55.7	10.8	3.67
2031	58.8	11.5	3.88
2032	62.1	12.3	4.10
2033	65.6	13.1	4.33
2034	69.3	13.9	4.57
2035	73.2	14.8	4.83
2036	77.4	15.8	5.11
2037	81.7	16.8	5.39
2038	86.3	17.9	5.70
2039	91.2	19.1	6.02
2040	96.3	20.3	6.36

Note: The anticipated permitted supply from existing wellfields is 2.54 mgd. Demand would exceed this supply in 2023. The proposed supply from additional wellfields owned by the Village (but not permitted) of 4.33 mgd would be exceeded in 2034.

Mountainville Wellfield

The use of the Mountainville wellfield was conceptually approved by the NYSDOH but the approval included several conditions that must be met before final approval, which has yet to be granted. One condition included the acquisition of a water taking permit from the NYSDEC, as this would be an interbasin transfer. Interbasin transfers require special review and approval by NYSDEC. Another condition requires the Mountainville

wellfield to have a backup supply, which is discussed below under the Catskill Aqueduct connection.

Concerns have been raised by numerous commenters on the Draft GEIS that the removal of groundwater would deplete the source water, Woodbury Creek, on a gallon per gallon basis.

Three issues were raised in the draft GEIS review process about the use of the Mountainville wells and this proposed interbasin transfer of 0.612 mgd:

1. The Town of Cornwall has expressed concern that the utilization of these sources by the Village of Kiryas Joel could deplete the current and future water supplies in the Town of Cornwall.
2. Ramapo River watershed residents commented that the water from the Mountainville wellfield would be used and subsequently discharged as treated wastewater into the headwaters of the Ramapo River, thereby degrading the only source of drinking water for the upper Ramapo River basin;
3. The sustainable yield of the Mountainville wells has also been contested. A test well (Mountainville Well #1) evaluated by a consultant for Kiryas Joel reported a sustained flow from this well of 425 gallons per minute (gpm), or 0.61 mgd. (the second well has not yet been drilled). Calculations by the consultant for Kiryas Joel indicated that a flow rate of 1,213 gpm (1.75 mgd) could be sustained by three wells, although 0.61 mgd was listed in the draft permit.

Measurements in August, 2010 by Chazen Companies on behalf of Orange County estimated the total flow in Woodbury Creek to be 960 gpm. Thus a groundwater withdrawal of 425 gpm (0.61 mgd) would constitute approximately half the flow of Woodbury Creek, if the gallon-for-gallon interconnection between the well field and the creek is correct. Under this assumption, surface water flows Woodbury Creek may be significantly impacted by withdrawals from the Mountainville wells, particularly during seasonal low flow conditions in the Creek.

Data reviewed for this report is insufficient to resolve the concerns expressed. Given the uncertainty, NYC DEC will likely require stream flow monitoring in the Creek as part of the conditions of the permitting of the Mountainville wellfield, with a possible decrease in permitted withdrawals based on the results.

Catskill Aqueduct Supply

Kiryas Joel has begun constructing a 24-inch pipeline to New York City's Catskill Aqueduct after initiating plans for the connection in 2000. Construction of the

planned 13-mile pipeline started in March of 2009. The first phase, to connect the Mountainville wellfield to the Kiryas Joel distribution system, is almost complete. Seven miles of pipeline remain to be constructed. The second phase will complete the connection to the Catskill Aqueduct on Riley Road in Cornwall.

New York City, in accordance with the New York State Water Supply Act of 1905, as embodied within the Administrative Code of the City of New York Section 24-360 entitles counties including Orange County that host City water supply facilities to take water, on a wholesale basis, from the City's water system^{§§}. Currently four community systems in Orange County obtain water from the Catskill Aqueduct, they include Stewart Airport, City of Newburgh, Cornwall-on-Hudson, and the Town of New Windsor.

A water treatment plant and vacuum primed pump station using the existing New Windsor aqueduct connection was included in the plans to serve this supply, according to the 2004 Final EIS for the Proposed Connection to the New York City Catskill Aqueduct, the Village of Kiryas Joel (2004 FEIS).

The project been reviewed and approved by the NYSDOH^{***}. Formal approval by the NYCDEP for the NYCDEP for connection to the Catskill Aqueduct currently remains outstanding, and the provision for future expansion is not clear.

The pipeline would likely serve as backup supply for the Mountainville wellfield^{†††} as it will probably be Kiryas Joel's most expensive source. According to the New York City Water Board^{†††} the cost to upstate customers of water from the New York City system is \$1.61/1,000 gallons. This wholesale rate cannot be compared directly with the current cost of water in the Village (\$3.75/1,000 gallons for residential customers and \$5.50/1,000 gallons for commercial and industrial users) because the New York City rate does not include pumping, treatment, the costs of distributing the water, and debt service on the \$45 million cost of the pipeline.

A 24-inch pipeline can convey 10 mgd, thus is capable of supplying the needs of the Village of Kiryas Joel for the foreseeable future. The limitation on use of the pipeline, however, will be the availability of backup supply. NYC requires 100% redundancy to

^{§§} The permitted withdrawal limit would be based on the census population times the average water use by New York City residents, which is 127 gpd. Given that Kiryas Joel's residential use rate is below this level and that the Village has other sources, the limitation is not expected to be limiting factor for withdrawal from the aqueduct.

^{***} In a letter dated August 14, 2012 from Mark Migliaccio, NYS DOH.

^{†††} One caveat in the use of the pipeline as backup: Using a 24-inch pipe to convey 2.0 mgd will result in low flow velocities (about 1 fps). When water flows slowly through a pipe, suspended solids that normally are removed in treatment or flushed through the system can settle in the pipes. This requires periodic flushing to remove waste, an operation that is challenging in a large water supply main.

^{†††} http://www.nyc.gov/html/nycwaterboard/pdf/blue_book/fy2016_upstate_rate_report.pdf

flows drawn from the aqueduct. Kiryas Joel will be required to acquire additional sources before it will be permitted to use more than 4.33 mgd, a level of demand expected to be reached about 2033.

The cost of the pipeline increased from an initial estimate of \$27.9 million in 2010 to current estimates of \$46 million. The Village charges one-time water connection fees of \$6,000 for each housing unit in the Village and \$25,000 for connections outside the Village. In a budget submitted to the NYS Environmental Facilities Corporation, the bonding loan agency, the Village will raise the in-Village connection fee to \$10,000 and plan to receive \$3 million per year, enough to cover the \$2.8 million annual bond payments. If annexation takes place the \$25,000 fee would not be collected in the annexation area.

Wastewater

Existing Conditions: OCSD No. 1

The collection and treatment of wastewater produced within the Village of Kiryas Joel is provided by Orange County Sewer District No. 1 ("OCSD No.1" or "the District"). OCSD No.1 also includes the Villages of Harriman and Monroe, and portions of the Town of Monroe. Additionally, the District provides treatment to wastewater received from the Towns of Blooming Grove, Woodbury and Chester, the Village of Woodbury, and portions of the Town of Monroe not otherwise included within the current boundaries of OCSD No.1 (collectively referred to as the "Moodna Communities").

Moodna Communities

Service to the Moodna Communities is subject to a series of intermunicipal agreements (IMAs) with the Moodna Basin Joint Regional Sewer Board. Each of the participating municipalities have established local sewer districts, (some municipalities have multiple districts) to provide for administration of the service areas. Following the incorporation of the Villages of South Blooming Grove and Woodbury in 2006, these villages are considered to be successors to the rights and obligations of the towns of Blooming Grove and Woodbury, respectively, with regards to the IMAs.

The IMAs are subject to modification or amendment and were last amended in 1995. The IMAs include a number of provisions including a stipulation that total flow from each municipality entering the OCSD No.1 collection system must be measured and recorded. The agreement also establishes wastewater flow allocations to each of the communities. These current flows allocations are as follows:

Moodna Community Flow Allocations

Municipality	Flow Allocation (gpd)
Village of Chester	347,000
Town of Chester	410,000
Town of Monroe	133,000
Village of South Blooming Grove	490,000
Village of Woodbury	1,030,000
Total	2,410,000

Historically, OCSD No.1 and the Moodna Communities have expressed interest in expansion of the District boundaries to formally include the Moodna Communities service areas (rather than as contract users), however no such adjustment have been made to date.

Wastewater Treatment Facilities

Treatment of wastewater received by OCSD No. 1 is currently provided at two wastewater treatment facilities (WWTF) permitted by the New York State Department of Environmental Conservation (NYSDEC) in accordance with the State Pollution Discharge Elimination System (SPDES): the Harriman WWTF and the Kiryas Joel WWTF.

Harriman WWTF

The Harriman WWTF, located on River Road in the Village of Harriman, was originally constructed in 1974, and following a facility improvement and expansion project completed in 2006 has a permitted treatment capacity of 6.0 million gallons per day (mgd). The treatment facility provides screening and grit removal, primary clarification, secondary treatment consisting of one activated sludge treatment train and two oxidation ditch treatment trains, secondary clarification, sand filtration, and disinfection and post-aeration prior to discharge to the Ramapo River via two SPDES-permitted outfalls.

Average Daily Flows

Current annual average daily flow to the WWTF (based on average daily flows between June 2011 and June 2015) is 4.17 mgd, though in the past flows have approached the permitted limit. In 2011, Orange County was required by NYSDEC to prepare and submit a Flow Management Plan (FMP) when during that year influent flows exceeded 95% (6,163,000 gpd) of the permitted capacity of the plant. The FMP was issued in July 2012 and attributed high flows to extreme wet weather events and inflow and infiltration (I&I) to the collection system. Following the implementation of

an aggressive I&I repair program and preventative maintenance, flows have been reduced to levels in conformance with the existing SPDES permit.

Expansion

Orange County recently commissioned a facility plan with the intent to expand the capacity of the Harriman WWTF to 9.0 mgd. The final facility plan is anticipated to be completed by June 2016. Based on the projected deadline of the facility plan, it is unlikely that any proposed expansion of the Harriman WWTF would be operational prior to 2018.

Kiryas Joel WWTF

The Kiryas Joel WWTF, located on Bakertown Road in the Village of Kiryas Joel, was constructed by the Village in 2000 to provide treatment to wastewater produced within the Village. Prior to construction, all wastewater from the Village was received and treated at the Harriman WWTF. The NYSDEC imposed a moratorium on the connection of new services within OCSD No.1 in 1994 based on the (then)-limited capacity of the Harriman WWTF. The Kiryas Joel WWTF was constructed to facilitate continued growth within the Village and was constructed with funding received by the Village from the New York Environmental Facilities Corporation (NYSEFC); no capital funding was received by the Village from OCSD No.1 for the construction of the Kiryas Joel WWTF.

The Kiryas Joel WWTF currently has a permitted treatment capacity of 0.97 mgd and discharges effluent to a SPDES permitted outfall to an un-named tributary of the Ramapo River. Treatment provided at the Kiryas Joel WWTF includes influent screening, primary settling, secondary treatment via rotating biological contactors (RBCs), tertiary filtration, and disinfection. Orange County/OCSD No. 1 is responsible for the operation of the WWTF (via a third party contract operator) under the terms of a frequently-renewed short-term lease agreement with the Village.

Wastewater usage within the Village of Kiryas Joel is predominantly residential and light-commercial. One key exception is the KJ Poultry Processing Plant ("KJ Poultry"). Average daily flows treated by the Kiryas Joel WWTF from the period between June 2014 and June 2015 were approximately 746,000 gpd; approximately 77% of the permitted capacity. Compared with 2011 average daily flows of approximately 390,000 gpd, flows to the Kiryas Joel WWTF has increased approximately 190% over this time period.

Historically, the Kiryas Joel WWTF has operated within the effluent limitations stipulated by the current SPDES permits, with only occasional sporadic exceedances (typically phosphorus and ammonia). Currently, however, the facility is subject to a NYSDEC consent order requiring the repair or replacement of several elements of the treatment system which have been deemed to be deficient.

There are currently no plans to increase capacity at the Kiryas Joel WWTF. Physically, the footprint of the plant occupies nearly the entire site, limiting expansion on the site. Changes to treatment methodologies and or expansion of the treatment train theoretically could increase treatment capacity in a very limited fashion.

Wastewater enters the treatment facility from the collection system via influent pumps, which limit the quantity of wastewater entering the Kiryas Joel WWTF. A diversion manhole located upstream of the influent pump station, diverts all flows in excess of the 0.97 mgd permit limit to the OCSD No.1 collection system for treatment at the Harriman WWTF. Wastewater from the overflow is directed via the "North Interceptor" sewer, which consists of approximately 0.7 miles of 15-inch and 18-inch diameter sewer main. Based on an I&I evaluation performed in 1991 by OCSD No.1, the maximum capacity of the North Interceptor has been determined to be approximately 2.8 mgd (no improvements to the North Interceptor have been made since that time).

This diversion of overflow effectively prevents the Kiryas Joel WWTF treatment system from operating beyond the currently permitted capacity. From a practical standpoint, any instantaneous flows in excess of the permitted average daily flow will continue to overflow to the OCSD No.1 collection system for treatment at the Harriman WWTF. Total flows through the North Interceptor are not routinely monitored, and overall daily wastewater flows produced by the Village of Kiryas Joel are not accurately known. However, in June of 2015 temporary flow monitoring equipment installed in the North Interceptor indicated daily average flows of approximately 890,000 gpd during the monitoring period.

There are currently no means of flow equalization that would ensure that the Kiryas Joel WWTF at the permitted flow capacity prior to diverting flows to the North Interceptor. This could be remedied through the installation of a flow equalization system. Under flow equalization, peak instantaneous flows would be temporarily retained during peak flow periods and fed back into the collection system during periods of below-average flows. This would reduce the diversion of flows to the Harriman WWTF via the North Interceptor, and allow for the full utilization of the Kiryas Joel WWTF prior to making such diversions from the Village.

KJ Poultry Plant

The KJ Poultry facility is connected directly to the Kiryas Joel WWTF; diversion of flow for treatment at the Harriman WWTF from this source is not currently possible. Flow from the KJ Poultry plant as reported for June 2014 to June 2015 averaged at 114,000 gpd (though the poultry plant does not discharge wastewater every day), compared to an individual permit limit of 300,000 gpd. During this period, wastewater from the KJ Poultry facility represented approximately 15% of all wastewater received at the Kiryas Joel WWTF.

A pretreatment system was constructed by KJ Poultry in 2011. The system (which is owned and operated by KJ Poultry) consists of a dissolved air floatation in order to reduce levels of Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), and fats, oils, and grease prior to discharge to the Kiryas Joel WWTF. Wastewater flows from the KJ Poultry pre-treatment system are monitored and recorded by Kiryas Joel WWTF operations staff.

Water Quality Impacts

Due to the unique nature of kosher chicken processing, high concentrations of Total Dissolved Solids (TDS), chiefly salt, originating from the KJ Poultry facility are ultimately discharged to the unnamed tributary of the Ramapo River via the Kiryas Joel WWTF effluent outfall, as the currently employed treatment technologies are unable to remove this contaminant.

Compared to the state-wide NYSDEC Class C stream standard of 500 mg/L for Total Dissolved Solids, sampling results in the unnamed tributary of the Ramapo River downstream of the Kiryas Joel WWTF have historically indicated TDS concentrations of approximately 4,000 mg/L. The current Kiryas Joel WWTF SPDES permit contains no effluent limit for TDS. Renewal of the Kiryas Joel WWTF SPDES permit (which is currently on-going) may result in the imposition of a TDS permit limitation on effluent from the plant. As discussed, the KJ Poultry facility is the presumed principal contributor of TDS to the Kiryas Joel WWTF, and improvements to the KJ Poultry pre-treatment system would be required to address TDS reduction in wastewater produced by the facility.

As part of ongoing stream water quality monitoring conducted since 2004, the Orange County Water Authority (OCWA) has collected specific conductance measurements (a proxy measurement for both Total Dissolved Solids and salinity) immediately upstream and immediately downstream of the Kiryas Joel WWTF effluent outfall. Most recent measurements taken in September 2012 indicated that specific conductance downstream of the outfall was 3,278 $\mu\text{S}/\text{cm}$ compared to a background measurement of 426 $\mu\text{S}/\text{cm}$ immediately upstream of the outfall. In their 2013 monitoring report the OCWA concluded that the specific conductance in the unnamed tributary to the Ramapo River exceeded NYSDEC level of concern of 800 $\mu\text{S}/\text{cm}$ (the level at which biological impairment is expected to occur), and that the Kiryas Joel WWTF was the primary source of this exceedance.

Projected Flows

Current wastewater flows based on a projected 2014 population of 22,634 and an average daily per capita water usage rate of 66 gpd (both as reported in the DGEIS), are estimated to be approximately 1,494,000 gpd. This includes all wastewater produced within the Village of Kiryas Joel, including flows from KJ Poultry. Based on

flow monitoring reports from OCSD No.1, average daily wastewater flows received at the Kiryas Joel WWTF in 2014 were approximately 741,000 gallons per day (gpd), which constitutes approximately 76% of the permitted capacity of 970,000 gpd. Flows which are diverted to the Harriman WWTF, which are not regularly measured or recorded, are estimated at 753,000.

Using this information, projected population growth and wastewater production within the Village of Kiryas Joel has been estimated as follows:

Projected Wastewater Production in the Village of Kiryas Joel

Year	Population	Wastewater Flows based on water usage of 66 gpd/capita (gpd)	Wastewater received by the Kiryas Joel WWTF (gpd)	Wastewater diverted to Harriman WWTF (gpd)
2014	22,634	1,493,844	740,667	753,177
2015	23,466	1,548,756	767,893	780,863
2016	24,301	1,603,866	795,217	808,649
2017	25,497	1,682,802	834,355	848,447
2018	26,984	1,780,944	883,015	897,929
2019	28,864	1,905,024	944,535	960,489
2020	30,890	2,038,740	970,000	1,068,740
2021	32,945	2,174,370	970,000	1,204,370
2022	35,177	2,321,682	970,000	1,351,682
2023	37,432	2,470,512	970,000	1,500,512
2024	39,870	2,631,420	970,000	1,661,420
2025	42,297	2,791,602	970,000	1,821,602
2026	44,683	2,949,073	970,000	1,979,073
2027	47,203	3,115,427	970,000	2,145,427
2028	49,866	3,291,165	970,000	2,321,165
2029	52,679	3,476,816	970,000	2,506,816
2030	55,651	3,672,939	970,000	2,702,939
2031	58,790	3,880,125	970,000	2,910,125
2032	62,106	4,098,999	970,000	3,128,999
2033	65,609	4,330,218	970,000	3,360,218
2034	69,310	4,574,481	970,000	3,604,481
2035	73,220	4,832,522	970,000	3,862,522
2036	77,350	5,105,120	970,000	4,135,120
2037	81,714	5,393,094	970,000	4,423,094
2038	86,323	5,697,312	970,000	4,727,312
2039	91,192	6,018,691	970,000	5,048,691
2040	96,336	6,358,198	970,000	5,388,198

Flows to the Kiryas Joel WWTF are projected to continue to increase until approximately 2020, as which point flow volumes will reach the permitted capacity of the facility (0.97 mgd).

At this time the Kiryas Joel WWTF will continue to operate with flows equal to the permitted capacity of the treatment system, and all subsequent increases in flow will be diverted to the Harriman WWTF. By 2031, it is projected that average daily flows

diverted to North Interceptor will exceed the 2.8 mgd capacity of that interceptor sewer, necessitating that it be replaced.

Harriman Wastewater Flows

To estimate total flow projections at the Harriman WWTF, census-based growth rates for the Towns of Blooming Grove, Chester, Monroe, and Woodbury and the Villages of South Blooming Grove, Chester, Monroe, Harriman, and Woodbury were utilized. The Tim Miller projections for Village of Kiryas Joel provided in the DGEIS, were utilized as they are considered to be more accurate. While not all areas of the noted municipalities contribute flow to OCSD No.1, it is assumed that population growth rates within areas connected to the collection system will be proportional to those in areas not connected to the collection system. The analysis of population growth in areas served by OCSD No.1 is not meant as an absolute statement of future populations, but rather to project increases in wastewater flow received by the Harriman WWTF^{§§§}. In this manner, population growth estimates serve as a surrogate means of determining wastewater flow increases.

Water Usage

The Village of Kiryas Joel has a relatively low per capita water usage (66 gpd/capita, as contained in the DGEIS.). This figure was verified by the Orange County Department of Health based on the Village's Annual Water Quality Reports. The Annual Water Quality Report is required by NYSDOH for all community systems. This reported usage rate is slightly below the national average of 81 gpd and the New York State average of 79 gpd. Average water usage in water districts in Orange County in 2010 was 118 gpd. Kiryas Joel's water usage rate is not atypical, as areas with higher density of development usually have lower water usage rates compared to other, less densely developed areas. Because of the higher average household size in Kiryas Joel (5.9 people per household in Kiryas Joel compared to 3.37 people per household in the rest of Orange County, as stated in the DGEIS), there is a negligible difference between Kiryas Joel and the rest of the county regarding the total amount of water used (and thus wastewater produced) on a per household basis.

Based on flow data provided by OCSD No.1, the average daily flow of wastewater received by the Harriman WWTF in 2014 was approximately 4,375,000 gpd, which represents approximately 73% of the currently permitted 6.0 mgd capacity of the facility. These flows include those diverted to the Harriman WWTF from the Village of Kiryas Joel, as well as flows from the remainder of OCSD No.1 and out-of-district users. As noted previously, the Village of Kiryas Joel diverted daily average flows of

^{§§§} It should be noted that while the population of the Town of Chester not incorporated in the Village of Chester decreased between 2000 and 2010, it is unlikely that this trend would continue over the time period contained in this analysis. However, in lieu of other population projections, this decreasing population trend has remained in this analysis <move to Table 3>

approximately 753,000 to the Harriman WWTF in 2014. Utilizing the population projections discussed above, future wastewater flows to the Harriman WWTF have been estimated as follows:

Projected Average Daily Flows Received at Harriman WWTF			
Year	Flows to Harriman WWTF (gpd)	Harriman Flows received from Kiryas Joel (gpd)	% of Harriman Flows Received from Kiryas Joel
2014	4,375,167	753,177	17%
2015	4,431,216	780,863	18%
2016	4,487,816	808,649	18%
2017	4,556,887	848,447	19%
2018	4,636,105	897,929	19%
2019	4,728,870	960,489	20%
2020	4,867,803	1,068,740	22%
2021	5,034,598	1,204,370	24%
2022	5,213,564	1,351,682	26%
2023	5,394,545	1,500,512	28%
2024	5,588,107	1,661,420	30%
2025	5,781,453	1,821,602	32%
2026	5,972,605	1,979,073	33%
2027	6,173,165	2,145,427	35%
2028	6,383,641	2,321,165	36%
2029	6,604,569	2,506,816	38%
2030	6,836,517	2,702,939	40%
2031	7,080,082	2,910,125	41%
2032	7,335,898	3,128,999	43%
2033	7,604,631	3,360,218	44%
2034	7,886,986	3,604,481	46%
2035	8,183,707	3,862,522	47%
2036	8,495,579	4,135,120	49%
2037	8,823,434	4,423,094	50%
2038	9,168,145	4,727,312	52%
2039	9,530,640	5,048,691	53%
2040	9,911,894	5,388,198	54%

As shown above, in 2014 wastewater flows diverted from the Kiryas Joel collection system constitute approximately 17% of all wastewater flows received by the Harriman WWTF. Based on these projections, it is estimated that total annual average flows the Harriman WWTF will exceed the currently permitted limit of 6.0 mgd in 2027, at which

time wastewater flows from Kiryas Joel will constitute approximately 35% of total flows received.

It should be noted that this projected SPDES permit exceedance is unlikely, as it is anticipated that improvements to increase the capacity of the facility to 9.0 mgd will be completed before influent flows exceed those contained in the existing SPDES permit.****

By continuing to extrapolate population growth within areas contributing flows to the Harriman WWTF, it is estimated that flows to the facility will exceed the proposed improved Harriman WWTF capacity of 9.0 mgd in 2038, at which point wastewater from Kiryas Joel will represent approximately 52% of all flows received at Harriman WWTF.

Assuming that additional improvements will have been made by 2038 to further increase the ability of OCSD No.1 to treat wastewater received, either at the Harriman WWTF or at other sites, extrapolating population growth to 2040 indicates that in that year wastewater produced in Kiryas Joel will constitute 54% of all wastewater received by OCSD No.1.

Future Expansion of OCSD No.1 Collection System

Currently, OCSD No.1 has no plans to expand the collection system. As detailed in the Orange County Sewer Use Law, however, there are means by which private developers may construct extensions to the collection system. Briefly, the Sewer Use Law requires all new sewers and appurtenant features must be designed by a Professional Engineer licensed to practice in New York State, designed in accordance with all standards and requirements of the NYSDEC, Orange County Department of Health, and the specifications as outlined in the Sewer Use Law. All testing of new sewers must be performed at the expense of the Developer, and the work is subject to periodic inspection by a representative of Orange County in order to determine compliance. Similarly, the construction of new service laterals to the collection system is only permitted following the authorization by OCSD No.1. Following final acceptance by the County, OCSD No.1 becomes responsible for the operation and maintenance of the new sewer system.

Additionally, the cost of extension of the collection system and any improvements to the existing collection system (including gravity mains, pumping stations, and

**** These proposed improvements are stipulated in an agreement between OCSD No.1 and Orange County which requires that the Harriman WWTF be improved or expanded once average daily flows to the Harriman WWTF exceed 85% of the permitted capacity (based on these flow projections, it is anticipated that flows to the Harriman WWTF will exceed this 85% threshold (5.1 mgd) in 2022). These improvements, and the subsequent re-rating of the facility, are not currently anticipated to be operational until 2018.

forcemains) which may be necessary to accept the increase in wastewater flows as a result of the expansion, is the responsibility of the developer

It should be noted that not all of the proposed annexation area is within the current boundaries of OCSD No.1, and it is unclear as to whether the boundaries would be expanded to include the expanded Village of Kiryas Joel, or if service would be provided on an out-of-district user basis. Compliance with the Sewer Use Law requirements is mandatory whether development were to occur in the proposed annexation area or land area outside of the proposed annexation territory.

Expansion of out-of-district municipalities is permissible, provided that each contributing municipality adopts their own Sewer Use Law which is as restrictive, if not more, than that of OCSD No.1, and that such expansion does not increase flows from the out-of-district municipality in excess of the flow allocation assigned to the municipality. In the event that an out-of-district municipality exceeds the applicable flow allocation (as previously discussed), they may be required by OCSD No.1 to purchase additional capacity.

Orange County staff has indicated that development that has occurred in Kiryas Joel is generally compliant with the regulations set forth in the Sewer Use Law with regards to both the expansion of the collection system and the connection of new services.

OCSD No.1 Sewer Rates and Fees

Properties within OCSD No.1 are currently billed for capital debt service and operation and maintenance of the system. Repayment of capital debt is based on assessed property values ("ad valorem") and is recalculated yearly based on budgeted debt repayment schedules. OCSD No.1 does not currently charge connection fees or "hookup fees" to properties which connect to the collection system, though newly installed laterals are subject to a \$500 permit fee.

Capital Charges

For purposes of capital debt payment, there exist two types of users:

- Type 1 users are all properties located within the OCSD No.1, regardless of whether or not they are physically connected to the collection system. Type 1 debt payments are intended for repayment of capital costs associated with treatment systems and trunk sewers. It should be noted, however, that OCSD No.1 bills no debt service for capital construction costs associated with the Kiryas Joel WWTF. In 2015, Type 1 debt payments were \$2.2059 per \$1,000 of assessed property value in the Town of Monroe and \$0.9725 per \$1,000 of assessed value in the Town of Woodbury. This difference is the result of differing equalization rates in these two

municipalities; the payment per \$1,000 of full property value is equivalent between the two towns.

- Type 2 users are those properties which are either connected to the OCSD No.1 collection system or located within 500 feet of the collection system (Type 2 users are also responsible for payment of Type 1 debt). Type 2 debt payments are intended for repayment of capital costs associated with collection system, including the identification and mitigation of inflow and infiltration. In 2015, Type 2 debt payments were \$0.1004 per \$1,000 of assessed property value in the Town of Monroe and \$0.0442 in the Town of Woodbury.

Operation and Maintenance (O&M) Charges

Operation and maintenance (O&M) fees are billed directly to the property owner by OCSD No.1 based on projected operational and maintenance costs determined as part of the yearly County budgeting process. Properties within OCSD No.1 which are not connected to the collection system are not charged for O&M costs. An exception to this policy is buildings which are located within 150 feet of the collection system (and in accordance with the Orange County Sewer Use Law are required to connect to the collection system) which have not complied with the requirement to connect; such properties are billed for O&M costs even if they remain unconnected (and may be subject to additional fines and enforcement action as per the Sewer Use Law).

O&M fees are based on "Units of Use" as defined in the OC Sewer Use Law; one unit is determined to be the equivalent of wastewater produced by one single family residence (400 gpd). The Sewer Use Law determines the units of use assigned to a given property based on property usage (for example, hotels, restaurants, industrial users, etc.). Orange County does not administer a water supply and distribution system, and not all properties served by OCSD No.1 are served by public water distribution systems, therefore units are not directly based on metered water consumption. However, it has been determined that approximately 91% of the users within OCSD No.1 are connected to a municipal water distribution system and provided with water meters.

For the purposes of determining operation and maintenance costs, there currently exist two types of users:

- Type A users are those users within OCSD No.1 (but not within the Village of Kiryas Joel), or users within the Village of Kiryas Joel that were connected to the collection system prior to the completion of the Kiryas Joel WWTF (stated as June 15, 2000 for billing policy purposes). Type A users are billed for O&M costs of the collection system and the Harriman WWTF. As of 2015 there are a total of 8,938 Type A units of use.

- Type B users are those users within the Village of Kiryas Joel that have connected to the collection system following the completion of the Kiryas Joel WWTF. Type B users are billed for the O&M costs of the collection system and the Kiryas Joel WWTF. Annual lease payments of \$700,000 per year from OCSD No.1 to the Village of Kiryas Joel are included entirely in the O&M fees paid by Type B users (Type A users do not directly contribute to the annual cost of the lease). As of 2015 there are a total of 2,833 Type B units of use (including 275 of which represent flows from KJ Poultry).

Type A users pay an additional fee in order to subsidize the operational costs of the Kiryas Joel WWTF effectively reducing O&M costs paid by Type B users. This subsidy is determined on an annual basis as part of the budgeting of O&M costs for OCSD No.1. In 2015, Type A user O&M fees were \$425 per Unit of Use (of which \$39 was the previously mentioned subsidy) and Type B user fees for a single family residence were \$575 per Unit of Use. Should the O&M subsidy paid by Type A users be discontinued, it is estimated that Type B user fees would increase to approximately \$721 per Unit of Use.

Moodna Communities

The Moodna Communities are also billed on a bi-annual basis for O&M costs. Only the cost of treatment at the Harriman WWTF is used; no operational costs for the OCSD No.1 collection system or other O&M costs unrelated to the Harriman WWTF are included. These operational costs on a per-gallon basis, coupled with recorded flows from each community are used to determine the O&M responsibilities of each out-of-district municipality.

Each of the Moodna Communities is billed the same on a per-gallon treated basis, and no additional out-of-district surcharge is added. In 2015, the O&M costs billed to the Moodna Communities is \$1.0721294 per gpd. In billing their own users, each Moodna municipality not only charges their users for the treatment costs as determined by OCSD No.1 but also for any O&M costs related to operating their own wastewater infrastructure.

Currently, OCSD No.1 does not bill the Moodna Communities for any capital debt service, though this could potentially change following the proposed upgrades to the Harriman WWTF or should a Moodna Municipality and OCSD No.1 agree to increase the flow allocations of a given municipality.

Conclusions and Recommendations

- There is no current means for recording and evaluating the flows of wastewater, both total and instantaneous, from the collection system in Kiryas Joel directed to

the Harriman WWTF. The growth of flow to the North Interceptor is significant and is anticipated to reach capacity no later than 2031. We recommend routine monitoring of flow at this location. While a more detailed evaluation of this portion of the collection system and the associated diversion manhole would be necessary as part of detailed design, it is recommended that a flow monitoring vault provided with a parshall flume be installed directly downstream of the existing diversion manhole.

- Due to the lack of upstream flow equalization and diurnal flow variations, diversion of wastewater to the North Interceptor effectively prevents the Kiryas Joel WWTF from actually operating at the permitted capacity. Under normal conditions it is not desirable to operate a wastewater treatment facility at the permitted capacity. However, due to the unique configuration of the Kiryas Joel collection system and the ability to divert flows to the Harriman WWTF, failure to operate the Kiryas Joel WWTF at or near the permitted capacity results in an under-utilization of the installed process equipment. It is recommended that OCSD No.1 consider installing an aerated equalization tank upstream of the diversion manhole. This would allow for the diversion of flows to the North Interceptor, while equalizing diurnal flows received at the pump station and therefore the Kiryas Joel WWTF.
- OCSD No.1 makes payments of \$700,000 per year to the Village. These funds are to pay debt service owed by the Village to the NYSEFC as well as for capital repairs and improvements to the facility. The costs for this lease are distributed only among Type B users through O&M fees. There is currently no stipulation in the lease agreement by which payments would be decreased once all capital debt for the construction of the Kiryas Joel WWTF is retired. Lease payments, either reduced to only that necessary for capital repairs and improvements, should transfer to OCSD No.1. It is recommended that Orange County consider this as part of the renewal of this lease and as an element of long term financial and operational planning of OCSD No.1.
- As previously discussed, there is a subsidy contained in the O&M fees paid by Type A users (those users in OCSD No.1 but not within the Village of Kiryas Joel or those users within the Village of Kiryas Joel that were connected to the collection system prior to the startup of the Kiryas Joel WWTF) to decrease the O&M fees paid by Type B users (those users within the Village of Kiryas Joel which connected to the collection system following the startup of the Kiryas Joel WWTF). Type A users within the Village of Kiryas Joel potentially benefit from the construction and operation of the Kiryas Joel WWTF as wastewater produced by these users can potentially be treated at the Kiryas Joel WWTF. However, applying this subsidy to those Type A users which are not located within the Village of Kiryas Joel results in such users carrying the portion of the cost of operating a treatment facility which

does not directly benefit them. As such, Type B users are disproportionately benefited to the detriment of Type A users outside the Village. It is not currently known how O&M costs for the proposed improvements at the Harriman WWTF will be distributed across the total user base of OCSD No.1, but it is recommended that as part of this rate determination Orange County also evaluate the value of the continuance of the existing subsidy.

- Calculation of capital debt service in OCSD No.1 is based on assessed property values. While ad valorem sewer taxes are not an atypical means of charging sewer users for service, such a method is generally most equitable for all users when the type of development and assessed property values are fairly homogenous across the entire service area (for example, in a newly developed subdivision). The Village of Kiryas Joel, however, has significantly higher density of development compared to that of the rest OCSD No.1, which results in lower assessed property values, as contained in the Orange County tax roll. As a result, the portion of the total capital debt serviced by the average user within the Village of Kiryas Joel is disproportionately less compared to the rest of OCSD No.1 on both a population and per capita usage basis.

The currently commissioned facility plan and capacity expansion at the Harriman WWTF will presumably include a detailed rate analysis in which of other methods of billing for capital debt service, including a per-unit system similar to how O&M fees are currently determined, in order to ensure equitable billing for future capital improvements within OCSD No.1.

Kiryas Joel Transportation

The Village of Kiryas Joel exhibits unique travel and mobility characteristics within and around the Village. Residents of the Village are prohibited from all non-emergency travel on the Sabbath and Holidays. Women do not own vehicles nor do they drive. There is a high reliance on pedestrian travel as well as mass transit.

The Village is densely populated and rapidly growing. Ten-year growth forecasts to the year 2025 indicate 3,825 new housing units (apartments and condominiums) and over 16,000 additional units to the year 2040. Both forecasts will strain the transportation infrastructure and a comprehensive traffic impact analysis should be completed.

Given the unique travel characteristics of the Village, the most important element of a traffic impact analysis would be to conduct a detailed study of those characteristics which includes:

- A. Preparing a travel survey for completion by Village residents that identifies their travel habits (drive, walk, car pool, mass transit user, etc.).
- B. Collecting traffic and pedestrian volume counts at a number of neighborhood intersections within the Village.

This information would allow the calculation of Village-specific trip characteristics rather than relying on national, industry standard trip rates, and it would eliminate the need to quantify and use trip reduction credits. The DGEIS relied on 2000 Census data, national trip rates, and Sabbath Day traffic volumes as a basis for its assumptions and traffic forecasts.

- C. Collection of traffic and pedestrian volume counts at a number of critical intersections outside the Village on local, county, and state roadways that may be impacted by the projected household growth. Important roadways are:
 1. Local – Bakertown Road; Schunnemunk Road; Forest Avenue; Seven Springs Road; Acres Road
 2. County – CR 44; CR 64; CR 105
 3. State – US 6; NY 17; NY 208
- D. Evaluating the parking and commuter rail needs at the Metro North rail stations as well as at Park and Ride lots to accommodate a potentially large increase in ridership from the Village.

The Village is accessed by a limited network of roadways with five or six entry/exit points. These few points will allow a viable and detailed travel survey that is necessary for an accurate representation of current and future travel characteristics.

Annexation – Year 2025

- The Transportation section of the DGEIS provides a general overview of the existing and future traffic into and out of the Village. A conventional traffic analysis of critical intersections impacted by the proposal was not included. Additionally, an analysis of future pedestrian and transit needs to serve a high proportion of walkers and transit users was not included in the DGEIS.

The estimate of new trips provided in the DGEIS associated with an increase of 3,825 additional housing units, relied heavily on national, industry standard trip rates adjusted downward by unsupported trip reduction factors. This reduction was applied to account for non-vehicular trips such as walkers, transit users, and lower vehicle ownership within the Village. The number of trips associated with the 3,825 additional

housing units as presented in the DGEIS is 870 trips in the weekday AM peak hour and 854 trips in the weekday PM peak hour are summarized in the table below.

DGEIS Trip Generation Summary (Vehicle Trips)

3,825 Housing Units	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Without Reduction Factors	335	1,403	1,738	1,316	695	2,011
With Reduction Factors ₁	168	702	870	559	295	854

(1) DGEIS Reduction Factors: AM Peak hour = 0.50; PM Peak Hour = 0.42

Because of religious and cultural influences Kiryas Joel exhibits travel characteristics that would reflect a reduction of trips when compared to national, industry standard trip rates; however, that reduction factor is not clear and has not been fully studied or documented. The industry rates for apartments and condominiums are based on data that accounts for lower vehicle ownership (and use) in an urban setting and access to transit. The trip reduction factors used in the DGEIS further reduced counts by this unknown factor.

In an effort to account for and offset this double-counting, the trip estimates for the annexation were recalculated. In simplest form for planning purposes, the trip reduction factors were cut in half and result in 1,303 trips in the weekday AM peak hour and 1,427 trips in the weekday PM peak hour. This trip generation estimate is summarized in the table following.

Alternate Trip Generation Estimates

3,825 Housing Units	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Without Reduction Factors	335	1,403	1,738	1,316	695	2,011
With Reduction Factors ₁	251	1,052	1,303	934	493	1,427

(1) Alternate Reduction Factors: AM Peak hour = 0.75; PM Peak Hour = 0.71

The DGEIS did not provide a detailed analysis of the traffic impacts on the roadway system within the Village or on surrounding network. The number of trips in Table 1 is significant and should have been evaluated as to their potential impacts.

Using the trip estimates from the table immediately above, a planning level analysis of the potential impacts was conducted in collaboration with the Orange County Department of Planning (OC Planning); OC Planning maintains a regional Travel Demand Model as a function of their role as MPO. The number of trips was inputted into the Orange County Travel Demand Model to obtain volume forecasts for the year 2025. The forecasts were then used to estimate impacts to a number of critical intersections in the area. The intersections include:

1. NYS Route 208/Mountain Rd. (CR 44)
2. NYS Route 208/NYS Route 17 WB Ramps
3. NYS Route 208/NYS Route 17 EB Ramps
4. NYS Route 208/Schunnemunk Rd/North Main St.
5. Freeland Rd. (CR 105)/Spring St.
6. Freeland Rd. (CR 105)/Larkin Dr.
7. Freeland Rd. (CR 105)/Dunderberg Rd. (CR64)
8. Highland Rd. (CR 105)/ Bakertown Rd.
9. Highland Rd. (CR 105)/Acres Rd.
10. Seven Springs Rd./Mountain Rd. (CR 44)/Acres Rd.
11. Mountain Rd. (CR 44)/Seven Springs Rd.
12. Forest Ave./Schunnemunk Rd.

The impacts were measured in terms of volume-to-capacity (v/c) ratio at an intersection; that is, how much traffic will be expected to pass through an intersection and compared against how much volume the intersection can process at its maximum, or capacity. A v/c ratio of 1.0 indicates that an intersection is operating at capacity. At this ratio, an intersection experiences long delays and additional traffic added to it will quickly deteriorate operations with extreme delays and back-ups. Intersections with v/c ratios of 85% and higher generally indicate that the intersection is approaching capacity and is likely experiencing some congestion on several movements through the intersection.

Another measure typically used to identify traffic operations in traffic studies is Level of Service. Level of Service (LOS) is a measure of the operational quality of an intersection; LOS A is the highest, most efficient level, and LOS F is the lowest level. The operational quality of an intersection is based on the average amount of time a vehicle is delayed. This analysis cannot be conducted with the information supplied in the DGEIS.

The table following shows modeling results of v/c ratios at critical intersections for 2015 existing conditions and 2025 conditions with Kiryas Joel Annexation and other background growth projected by OC Planning at 2% per year.

V/C Ratios

Intersection	Type	Year		
		2015 v/c Ratio	2025 ¹ v/c Ratio	2025 ² v/c Ratio
NYS Route 208/Mountain Rd. (CR 44)	Unsignalized	80%	85%	94%
NYS Route 208/NYS Route 17 WB Ramps	Signalized	69%	70%	70%
NYS Route 208/NYS Route 17 EB Ramps	Signalized	69%	70%	76%
NYS Route 208/Schunneunk Rd/North Main St.	Signalized	56%	63%	71%
Freeland Rd. (CR 105)/Spring St.	Signalized	70%	74%	76%
Freeland Rd. (CR 105)/Larkin Dr.	Signalized	87%	88%	94%
Freeland Rd. (CR 105)/Dunderberg Rd. (CR64)	Signalized	82%	91%	101%
Highland Rd. (CR 105)/ Bakertown Rd.	Unsignalized	54%	68%	71%
Highland Rd. (CR 105)/Acres Rd.	Unsignalized	39%	45%	55%
Seven Springs Rd./Mountain Rd. (CR 44)/Acres Rd.	Signalized	15%	20%	27%
Mountain Rd. (CR 44)/Seven Springs Rd.	Unsignalized	15%	23%	24%
Forest Ave./Schunneunk Rd.	Unsignalized	22%	40%	47%

(1) Network with Kiryas Joel Trips

(2) Network with Kiryas Joel Trips and Other Background Traffic Growth

These data show that for 2015 conditions the intersection of Freeland Road (CR 105)/Larkin Drive is the most heavily traveled with a v/c ratio of 87% followed by the adjacent intersection of Freeland Road (CR 105)/Dunderberg Road at 82%. It is noted that these intersections provide access to the primary routes into and out of the area that lead to major areas of employment, namely Route 6, Route 17, Route 32, and I-87.

The Larkin Drive and Dunderberg Road intersections with CR 105 will see increasing delays with the intersections at or approaching capacity. The intersection of Route 208/Mountain Road (CR 44) will also be approaching capacity. These v/c ratios indicate a potential demand for additional lanes and/or change in traffic control to accommodate the traffic growth. Again, these impacts were not evaluated in the DGEIS. A full analysis of the intersections is warranted.

Beyond the impacts from an increase of vehicular traffic is the impact from additional pedestrians (and transit users) with a population increase forecasted at nearly 20,000 people to the year 2025. Using tables from the DGEIS show that it can be expected that about 25% of the population increase will be workers in Kiryas Joel (DGEIS, page 2-4), and that 30% of the workers walk to work. This equates to an increase of 1,500 pedestrians. Other key metrics reported include 23% drive alone, 20% carpool, 1% bike, and 4% take taxi or ride motorcycle. Four percent work at home.

In addition to pedestrian growth, 19% of the population will use public transit to get to work^{###}. Assuming half of these workers also walk to get to transit stops, this further increases the number of additional pedestrians in the Village by another 500. These estimates do not include the increase in non-worker pedestrians such women and children under the age of 16 that will occur.^{###}

Sidewalks exist throughout the Village and they are generally 6 – 7 feet wide. Walkways in urban areas and similar locations should be designed to provide for adequate capacity to accommodate the projected and/or build-out peak pedestrian volume. Additional space along a pedestrian access route, however, provides lateral clearance along building faces, basement entrances, and similar locations and accommodates shy distance, window shopping, deliveries to businesses, building maintenance activities, and snow storage. (HDM, Chapter 18, page 18-22). No discussion was provided in the DGEIS regarding the capacity and width of the sidewalk network being able to accommodate such a significant increase in pedestrians, or if they will have to be accommodated within the roadway. There are no sidewalks outside the Village to accommodate pedestrians. Roadway shoulder widths outside the Village generally range from 2 – 4 feet with spots of 5 – 7 feet.

Also, it can be expected that improvement to transit service and amenities will be required. The DGEIS states that the lot at the Metro North Station in Harriman is 69% utilized and the other Park and Ride lots in the area are heavily utilized as well; yet, their needs have not been evaluated. It is vitally important to evaluate the needs of pedestrians and transit users for the Annexation proposal.

It is noted that this is a qualitative planning level evaluation and provides an indication where a detailed analysis is required to further identify and define the traffic needs resulting from projected growth. The following items are needed for an accurate and adequate study of the traffic impacts:

^{###} DGEIS, Appendix F, Table F3-1, page F-1

^{###} *ibid*

1. Origin and Destination survey of residents within the Village to develop trip generation rates (i.e., license plate survey, mail back survey, roadside interview survey).
2. Intersection turning movement traffic counts at intersections within the Village and surrounding areas for Weekday AM and PM peak hours to gather vehicular and pedestrian data.
3. Transit study for evaluating demand for increases in service buses and rail cars as well as additional or expanded park and ride facilities.
4. Accident/safety study.
5. Detailed level of service analysis of the traffic impacts for intersections within the Village and surrounding areas and analysis of pedestrian impacts.
Intersections within the Village, at a minimum, include:
 - Forest Rd./Van Buren Dr.
 - Forest Rd./Mordche Scher Rd.
 - Forest Rd./Hayes Ct.
 - Schunnemunk Rd./Zenta Rd.
 - Schunnemunk Rd. /Mordche Scher Rd.
 - Seven Springs Rd./Nickelsburg Rd.
 - Bakertown Rd./Meron Dr
6. Identification and evaluation of mitigation measures.

The growth anticipated in Kiryas Joel will likely have traffic impacts at intersections along CR 105 such that improvements will be needed. Intersections within the Village will also be impacted and will also likely require improvements. Of equal or more importance are the needs to accommodate the significant growth in pedestrians and transit users. Sidewalks will likely need to be widened, and expanded beyond the Village limits.

Beyond 2025 to 2040

Long-term, 25-year population and housing forecasts for Kiryas Joel have been provided. These estimates indicate a population increase of almost 74,000 people over year 2014 levels and a corresponding increase of over 16,000 housing units. The next

two tables are presented to put the number of vehicle trips in perspective for this growth using the same factors to generate year 2025 estimates.

DGEIS-Factored Trip Generation Summary (Vehicle Trips)

16,260 Housing Units	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Without Reduction Factors	1,380	5,750	7,130	5,375	2,845	8,220
With Reduction Factors ₁	690	2,875	3,565	2,255	1,195	3,450

(1) DGEIS Reduction Factors: AM Peak hour = 0.50; PM Peak Hour = 0.42

Alternate Trip Generation Summary (Vehicle Trips)

16,260 Housing Units	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Without Reduction Factors	1,380	5,750	7,130	5,375	2,845	8,220
With Reduction Factors ₁	1,035	4,310	5,345	3,815	2,020	5,835

(1) Alternate Reduction Factors: AM Peak hour = 0.75; PM Peak Hour = 0.71

This shows a potential increase of 4,000 new vehicle trips above 2025 levels for the weekday morning and afternoon peak hours. Beyond the increase of vehicular traffic is the increase of additional pedestrians. Using the same factors from year 2025 results in an increase of 4,500 pedestrians walking to work above 2025 levels.

In addition to employees who walk to work there will be 1,300 more pedestrians who use public transit to get to work. Again, these estimates do not include the increase in non-worker pedestrians such women and children under the age of 16 that will occur.

A modeling forecast using the Orange County Travel Demand Model was not prepared for these projections, but the level of increases will result in a breakdown of the transportation network in the Village and surrounding areas, as well as a breakdown in transit accommodations. This further supports the need for a

comprehensive evaluation of the traffic impacts and transportation needs to accommodate the demands associated with the growth of the Village of Kiryas Joel.

Public Safety Services

Police

The residents of the Village of Kiryas Joel are protected by the New York State Police (NYSP) stationed in Woodbury and Kiryas Joel Public Safety (KJPS). NYSP Troop F is the primary responder to the town and several neighboring communities with between 1 and 3 units available to patrol and respond. Additional troopers can be pulled from other areas for large events. KJPS has a force of 45 public safety officers employed by the Village with 3 to 4 typically on duty. Calls to 911 for police are answered by the Orange County 911 center and transferred to the State Police Barracks. In all but the most serious situations, the calls are immediately referred to Kiryas Joel Public Safety for one of the public safety officers to respond. Residents of the Village often call the KJPS directly, rather than using 911.

Public safety officers (sometimes referred to as constables) are not equivalent to police officers in either training or authority. They operate as "peace officers" under NYS Penal Law and have limited powers to arrest, detain, investigate or use force when compared to sworn police officers. Only the director is full time and staffing is variable. Similar to the limited scope of the officer's authority, the Public Safety Department is limited in its authority and does not need to file reports using standardized state forms.

KJPS reports to have "equipment includ[ing] 10 patrol vehicles, one EMS Command Center, one Emergency Service Unit truck, five emergency generator light towers and 500 metal barricades. The portable light towers and barricades are available for use during public events. The entire Village is part of a 24 hour surveillance system with three monitoring security booths plus a command center." This seems to be sufficient equipment both for their routine staffing and for special events.

The KJPS staff are employees of the Village. The Orange County Civil Service Office lists only the title of Watchguard for the department of Public Safety in Kiryas Joel and lists five employees in that job classification. This substantial discrepancy should be addressed by the including creating a job description for Public Safety Officer with accurate qualifications and properly listing the professionals that work in this job title.

The KJPS is funded by the general fund of the Village. Over the last five years, the largest expense has been for personnel services. However, there have been several years with substantial capital expenses for traffic control equipment.

Kiryas Joel Police (Public Safety) Expenditures						
Fiscal Year	2009	2010	2011	2012	2013	2014
A31204 Police, Contr Expend	\$ 212,690	\$ 106,952	\$ 153,146	\$ 199,540	\$ 213,363	\$ 165,704
A31202 Police, Equip & Cap Outlay	\$ 8,660	\$ 8,796	\$ 2,787	\$ 50,696	\$ 33,554	\$ 57,178
A31201 Police, Pers Serv	\$ 190,407	\$ 266,290	\$ 303,300	\$ 350,197	\$ 354,409	\$ 315,358
A33104 Traffic Control, Contr Expen	\$ 51,298	\$ 181,085	\$ 8,316	\$ 1,873	\$ 14,130	\$ 21,240
A33102 Traffic Control, Equip & Cap Outlay					\$ 16,000	
H33972 Traffic Control-Park, Equip & Cap Outlay	\$ 92,584	\$ 471,138	\$ 1,043,040	\$ 336,634		
Police (Public Safety) and Traffic Control Budget	\$555,639	\$1,034,261	\$1,510,589	\$938,940	\$631,456	\$559,480

While specific data related to the activity of KJPS was not available, it is reported that there are very few serious crimes in the community. The NYSP reported that they only responded to the community 268 times in 2014^{§§§§} and that is representative of a typical year.

While the call volume would inevitably grow with an increase in population and with increased traffic, the number of calls in the Village for NYSP is small to begin with and the increase could be handled through a gradual ramp up in staffing of the NYSP. KJPS would also be able to add staff to meet the increase demand. The village could also consider creating a police force with certified police officers and reduce their reliance on the NYSP.

The growth of the community will have an impact on law enforcement outside of the Village. The increase in traffic will lead to additional incidents of motor vehicle crashes and other traffic-related police activity. This increase in demand may lead to a need for increased staffing of the NYSP as well as neighboring agencies such as the Village of Monroe.

Fire Protection

The Village has a well-equipped fire department that is primarily staffed by volunteer residents. The department operates three fire engines (pumpers), a ladder truck, a fully equipped rescue truck plus a mini pumper and a command vehicle out of a single station located in the north eastern corner of the Village.

In addition to the volunteers, the department has a full time paid fire chief and a number of per diem firefighters that staff the fire station on the Sabbath^{*****} and other holy days. The per diem staff is on duty approximately 75 days out of the year.

§§§§ For comparison, the Town of Monroe had 2,868 calls for about half the number of residents.

***** The Hasidic volunteers can respond to life threatening situations on the Sabbath, but once the threat to life has been mitigated they must immediately return to keeping their Sabbath practices.

Available information shows that there are five part time employees with the civil service title of Firefighter and one full time fire chief with the civil service title of Laborer.

Residents of the Village can either call 911 or contact KJFD directly for service. The majority of the calls go directly of KJFD because their dispatchers speak Yiddish. KJFD notifies the Orange County 911 Center when they are dispatched to calls. In 2013, KJFD responded to 890 calls and 954 in 2014. The calls reported to 911 for 2013 were substantially less than those reported to the New York State Office of Fire Prevention and Control. The reason for this discrepancy is unclear. Based on the data submitted to the state, KJFD has had a substantial increase in calls between 2011 and 2013.

Kiryas Joel Fire Dept. Call Volume					
	2009	2010	2011	2012	2013
Total Calls	912	883	960	1,121	1,490

Source: NYS Office of Fire Prevention and Control

Impact of Religious Beliefs on Firefighting

The Hasidic restriction on shaving limits the ability of the volunteer firefighters to properly use self-contained breathing apparatus to enter hazardous situations in compliance with OSHA regulations. Therefore, whenever there is a significant fire, the Village must request mutual aid from neighboring fire departments. This reliance on outside resources to extinguish routine fires could be interpreted to violate the Orange County Mutual Aid plan that states: *“Under generally accepted standards (ISO Municipal Grading Schedule), a fire department is expected to have appropriately trained manpower and equipment to handle two emergencies of moderate proportion. In essence a fire department would be expected to be able to at least fill a first alarm assignment and still have available resources to provide a minimal level of protection to its jurisdiction.”*^{****} Expanded territory and population will inevitably lead to additional requests for mutual aid to provide essential fire protection services that the Village should be able to provide on its own. The Village should present a mitigation plan to prevent this unreasonable burden on neighboring departments, or adopt a plan that requires sufficiently trained firefighters on duty.

KJFD Budget

KJFD has had substantial investment in capital equipment in the last 5 years with the purchase of a new ladder truck and engine through grant requests. The department has also seen a substantial increase in their personnel services line. In addition to the

^{****} Orange County Fire Mutual Aid plan, accessed via website on 6/18/2015 at http://www.orangecountygov.com/filestorage/1162/977/Orange_County_Fire_Mutual_Aid_Plan.pdf

expenses shown here, the full time fire chief is paid out of another budget line in the department.

Kryias Joel Fire Dept. Budget						
Fiscal Year	2009	2010	2011	2012	2013	2014
A34104 Fire, Contr Expend	\$ 186,706	\$ 174,188	\$ 140,971	\$ 150,195	\$ 180,586	\$ 216,055
A34102 Fire, Equip & Cap Outlay	\$ 20,976	\$ 47,909	\$ 43,738	\$ 5,152	\$ 41,203	\$ 66,902
H34102 Fire, Equip & Cap Outlay	-	-	\$ 307,703	\$ 37,650	\$ 170,000	\$ 80,000
A34101 Fire, Pers Serv	\$ 5,250	\$ 21,700	\$ 27,079	\$ 25,032	\$ 70,020	\$ 69,446
Fire Protection	\$212,932	\$243,797	\$519,491	\$218,029	\$461,809	\$ 432,403
Source: NYS Comptroller's Office						

ISO Ratings

The Insurance Services Organization (ISO)^{###} rates each community in the United States with a Public Protection Classification (PPC). The PPC rates each department service area on a scale of 1 to 10. Lower numbers indicate better fire protection in the community. The PPC was devised to help insurance underwriters identify risk and is used to set fire insurance premiums. The PPC evaluates three primary areas: Receiving and Handling of Fire Alarms, the Fire Department, and Water Supply. Roughly half of the score relates to the communications systems and water supply, while the remaining half looks at different features of the fire department.

In 2009, the KJFD scored an overall rating of Class 4 which places it in the top third of departments in New York. The rating document identified that the department scored well in the areas of equipment, dispatching capability and water supply. According to the report, to improve its rating, the department should improve its training, ensure a more robust first alarm response from company personnel, substantially improve its training, and develop a fire preplanning system.

The area that is proposed to be annexed is currently in the Monroe Joint Fire District (MJFD). The MJFD was rated in 2013 by ISO and scored a Class 3/8B. This split designation relates directly to the available water supply. Property that is located within 1,000 feet of a fire hydrant are rated lower (better) while those that are more than 1,000 feet from a fire hydrant are at the higher (worse) score. The rating document identified that the department scored well in the areas of equipment, dispatching capability and water supply in areas with hydrants. MJFD score relatively well in the area of company personnel for a purely volunteer department. However, the department received only 1.78 of 9 points in the area of training and planning.

According to the ISO ratings, there will be little impact to properties that are annexed into the KJFD service area because there is little change to insurance premiums with a

^{###} Additional information on the PPC program can be found at <http://www.isomitigation.com/ppc>

change in score from 3 to 4. The substantial change for any property will be the addition of fire hydrants which could be accomplished without annexation.

ISO Ratings for Community			
	Possible	Kiryas Joel	Monroe
Class		4	3/8B
Call Handling	10	7.67	8
FD Apparatus	22	17.8	19.63
FD Distribution	4	2.79	3
FD- Personnel	15	4.65	7.43
FD- Training	9	1.53	1.78
FD- Total	50	26.77	31.84
Water System	40	30.97	35.31
Divergence *		-4.78	-4.92
Total	100	60.63	70.23
Source: ISO Reports			
* Divergence allows ISO to control for the influence of any single category to have outsized sway on the rating.			

Impacts on Fire Department Operations

In an annexation of territory by the Village, the fire protection borders do not automatically adjust. The DGEIS does not state the whether the Village or residents of the annexed area would seek to reduce the boundaries of the Monroe Joint Fire District after annexation. Such a shift in borders is provided for under state law and the applicant should clearly articulate their intentions related to shifting the borders.

If the boundaries of the district are reduced, the Monroe Joint Fire District will see a reduction in tax revenue with no likely change in demands for service. The DGEIS should address how that negative impact should be addressed and how the Village will offset the lost revenue.

Most of the proposed area of annexation does not have municipal water and fire hydrants. The proposed structures, even with sprinklers, have the potential for large fires from the substantial use of combustible material in their construction. The Village must address the adequacy of water supply for fire suppression including hydrant locations, water pressure and flow rate of the water. Until municipal water is present, resources for water such as draft points and cisterns should be considered to meet the need of fire suppression.

If KJFD becomes responsible for the annexed area, it should then address how the department will meet industry standards for staffing and operations (such as NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations,

Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments) without reliance on mutual aid for basic fire department operations. The KJFD may need to add staff on a full time basis to provide an adequate first alarm response. In particular, the standard calls for a minimum of four firefighters capable of conducting an interior attack and several other firefighting roles that OSHA standards require the use of SCBA to safely perform.

Like Kiryas Joel, almost all (87%) communities between 10,000 and 25,000 residents in the United States are served by a fire department with at least some career staff^{§§§§§}. The median ratio of volunteer firefighters per 1000 people in comparable communities in the northeast is 1.87. In Kiryas Joel, it is estimated to be 2.8 volunteers per 1000 residents. This higher rate of volunteers is admirable. However, as noted, many of these volunteers cannot safely serve in the role of interior fire fighter and therefore KJFD should consider expanding the staff of fully capable paid firefighters as the population grows and geography expands.

If the annexed area remains in the Monroe Joint Fire District, the MJFD should consider if the increased call volume will necessitate the addition of paid staff in their companies to handle the increase in calls.

Ambulance Service

Kiryas Joel Emergency Medical Services (KJEMS) is a private 501(c)(3) organization that provides paramedic ambulance service to the Village of Kiryas Joel and also responds on mutual aid to assist the Orthodox Jewish population outside of the Village. KJEMS has a paramedic ambulance operating certificate issued by the New York State Department of Health for the territory of the Village. If the Village is expanded, KJEMS's legal operating territory will also expand to match the Village. If the area is not annexed into the Village, an agreement should identify how residents in that area will access EMS services and if the Monroe Volunteer Ambulance will need to adjust its staffing model to handle the increased call volume or if KJEMS will seek to extend their authorized operating territory.

All responses by KJEMS outside the Village to assist the Orthodox Jewish population are performed under the auspices of mutual aid, although those responses are not always clearly communicated to the home ambulance service. Local EMS officials indicate that there is a tacit understanding that KJEMS is willing to respond anywhere in Orange County to provide ambulance response for residents of Kiryas Joel or other Orthodox Jews. Local EMS agencies often avail themselves of this resource to provide culturally and medically appropriate care to this population.

^{§§§§§} NFPA, US Fire Department Profile, 2012, October 2013

KJEMS also participates in the regional mutual aid system which leads to dozens of requests for KJEMS ambulances and paramedics to respond to neighboring communities annually. In 2013, KJEMS reportedly responded to 91 calls and in 2014 to 75 calls on an official mutual aid basis.

KJEMS reportedly has 70 basic volunteer responders and 20 paid on call paramedics who utilize six ambulances to provide emergency medical services. There are staff on duty 24 hours per day. All members of KJEMS reportedly live in the community and are available to provide additional staffing as needed. KJEMS was recognized in 2014 as the EMS Agency of the Year for Orange County for their outstanding level of service.

KJEMS reports a call volume of 4,500 per year or about 12 calls per day. Nearly all requests for KJEMS are received via a direct call to a KJEMS dispatch center. Very few calls are received by the Orange County 911 Center. When a call is received by the 911 Center, they are immediately given to KJEMS. KJEMS does not routinely notify the county's dispatch center of their activities.

KJEMS Financial Operations

KJEMS operates independently of the Village government, but does receive a stipend from the Village. However, its primary revenue is billing for service. According to IRS filings, KJEMS received about 80 % of its revenue from billing in 2011, 2012 and 2013.

The largest expense for the operation is employee compensation (salary, benefits and payroll taxes) accounting for about third of expenses. The "other expenses" category accounts for about another third of the expenses. On the IRS filings, the other category includes items such as rent or mortgage, utilities, and medical supplies. According to the IRS information, KJEMS had net assets of \$722,466 at the end of their 2013 fiscal year. This was an 80% increase from 2011.

KJEMS Financial Summary			
	2011	2012	2013
Revenue			
Gov. Grants	\$ 40,000	\$ 125,000	\$ 59,155
All Other Contributions	\$ 192,247	\$ 285,111	\$ 266,290
Medical Billing	\$ 1,102,601	\$ 1,474,377	\$ 1,333,598
Sales of Assets/Invest	\$ 6	\$ -	\$ 32,640
Total Revenue	\$ 1,334,854	\$1,884,488	\$ 1,691,683
Expenses			
Employee Compensation	\$ 552,780	\$ 586,750	\$ 496,580
Administrative Expense	\$ 140,870	\$ 113,466	\$ 139,538
Interest/Depreciation	\$ 81,990	\$ 4,202	\$ 171,602
Medical Billing	\$ 165,163	\$ 215,388	\$ 175,897
Patrol Service	\$ 92,892	\$ 85,791	\$ 91,937
Fuel	\$ 65,388	\$ 72,044	\$ 76,853
Other Expenses	\$ 297,513	\$ 442,343	\$ 503,291
Total Expense	\$ 1,396,596	\$1,519,984	\$ 1,655,698
Revenue less Expenses	\$ (61,742)	\$ 364,504	\$ 35,985
Source: IRS 990 Forms			

Future EMS Operations

KJEMS has grown in step with the population growth of the Village and has adapted its operations as training standards and equipment have changed. There is no indication that this practice will change or that the organization won't be able to respond to the growth. KJEMS is primarily funded through patient billings and will be able to expand their operations as their call volume increases with a matching increase in revenue. There is a possibility that their volunteer BLS model will not be able to sustain itself as the call volume increases, but KJEMS would likely then use the increased revenue to hire paid EMTs to work with their paid paramedics.

Public Education

The education of its children is central to the Hasidic community's spiritual mission and critical to its continued existence as a distinct culture. Accordingly, the community has established a network of private yeshivas to serve its students. We assume that nearly all children born to this community will continue to be educated in one of the private yeshivas whether annexation occurs or not. For this reason, we only address the fiscal characteristics of the *status quo*, and make only contextual comments on the educational issues.

Fiscal Impact

The DGEIS presented an analysis of the change in the distribution of cost between KJUFSD and MWCSO from the annexation, based on the presumption of a boundary adjustment between the two districts if the annexation were to occur.

Property Tax

Our analysis of the property tax impact of the annexation concurs with that of the DGEIS. For a variety of reasons—transportation cost, the tuitioning of students with disabilities and other factors discussed in the DGEIS—MWCSO's property tax burden would be less if the annexation lands were redistricted into the Kiryas Joel Union Free School District. The costs borne by KJUFSD would be correspondingly higher. This finding applies whether or not the annexation occurs, although the boundary of KJUFSD is defined to be co-terminus with the Village. A boundary adjustment without annexation would require special legislation.

Federal & State Aid

The DGEIS does not address the question of federal and state aid. For purposes of identifying the fiscal impact of continued expansion of the Hasidic Jewish community in Orange County, we discuss these below.

The district of a child's residence receives federal financial support according to the number of children *resident* in the district and their poverty status. New York State education aid, by contrast, is principally determined by the number of students who are *enrolled* in the district's (public school) programs and, again, by their poverty status plus a number of other factors, e.g. property wealth per enrolled student, local tax effort and a number of specific cost factors. The state also provides some aid specifically targeting nonpublic schools, but the bulk of state education aid goes to the public districts for students they enroll.

Federal Funding: No Child Left Behind (NCLB)

Funding under the federal NCLB has several different components and formulas, four of which are applicable here. All of the funding received by both school districts has an equitable distribution requirement, meaning it is used for public and private school children attending a school located within the district's boundaries. The four NCLB funding streams are:

- Title I funding, which is to be used to address additional academic needs of low income children, is determined using the rates of economically disadvantaged students attending private and public schools in a district. These funds essentially "pass through" the district of residence and follow the child.

- Title II funding, which also has an equitable distribution requirement, is used to provide professional development for teachers and principals.
- Title III funding supports Limited English Proficiency students and Immigration programs. Programs and activities funded under Title III must help LEP students attain English language proficiency while meeting New York State academic achievement standards. Instruction may be given in both English and the student's native language.

For school year 2013-14^[1], the NYS Education Department (NYSED) reports that there were 209 K-12 public school students attending the public school located within the KJUFSD (2 in Kindergarten, 77 in elementary, 72 in secondary plus 59 students residents of other districts). The NYSED report indicates that 10,656 students who are resident in the KFUFSD attended nonpublic schools, presumably yeshivas located both in Kiryas Joel and in the Town of Monroe.

As Title funds are largely distributed according to the characteristics of all the children resident in the district, not simply those enrolled, KJUFSD received \$5.2 million in Title I funding (\$1,111 per economically disadvantaged student), which may be used for secular instructional support services and staff. KJUFSD also received \$0.6 million in Title II professional development funds. The formula for Title II funding includes a per student rate, but is also determined by the amount of professional development being delivered as well as other factors. Title III funds are directly linked to the number of students who have Limited English Proficiency (LEP) attending public and not-for-profit private schools within a district and for Immigrant programs. Kiryas Joel received \$0.9 million for 6,059 students to fund LEP programs, and no funds for immigrant programs.

By way of comparison, only 7% of MWCSO students of the students considered economically disadvantaged (v. 62% in KJUFSD). As a result, MWCSO receives significantly less than KJUFSD in Title I funds at \$0.5 million, \$0.2 million in Title II funds, \$0.6 million in LEP funds for about 4,100 students, and a small sum in Immigrant Program funds under Title III. In 2014, 447 students resident in MWCSO attended yeshivas.

The following table shows the current NCLB funding received by the respective districts, and a forecast of federal funding to 2025. Though CGR's demographic data extends to 2040, there were too many variables involved in residency and school location for predictions to be meaningful. As the funding flows with the children, the

^[1] These data are from the KFUFSD summary from the NYS Education Department. Enrollment is reported by "BEDS day"—the day in October all districts report current enrollment to the Basic Educational Data System maintained by NYSED. BEDS day in 2014 was October 23.

total will not change with the annexation decision, although the distribution of funds would vary.

Source of Funding	KJUFSD	MWCSD
Title I	\$5,210,581	\$506,625
Title II	\$557,006	\$161,500
Title III (LEP)	\$947,278	\$643,192
Title III (Immigrant Program)	0	\$30,575
Total NCLB Title Funding (2013-14)	\$6,714,865	\$1,341,892
Total NCLB Funding in 2025 (across both districts)	\$13,800,000	

New York State Education Aid

As noted above, KJUFSD resident enrollment in 2013-14 was 150 in K-12 (plus 59 nonresident students from other districts). The remaining resident students—about 10,656 on BEDS day in 2014—attended private yeshivas. Enrollment of students resident in the Village of Kiryas Joel totaled 10,806. Enrollment of students resident in the Village of Kiryas Joel totaled 10,806.

Enrollment at yeshivas located in Kiryas Joel or the Town of Monroe is listed below by school. Of the total below, 359 were reported to be resident in the Monroe Woodbury Central School District.

Yeshivas located in KJUFSD & MWCSD	Pre-K	Grades K-6	Grades 7-12	
Congregation Bnei Yoel School	-	1,078	685	
Sheri Torah	200	1,922	812	
UTA of Kiryas Joel-Boys	184	2,046	717	
UTA of Kiryas Joel-Girls	189	1,953	1,125	
Total	573	6,999	3,339	

Total New York State aid to the Kiryas Joel Union Free School District for the 2013-14 school year was \$6.3 million, which is consistent with BOCES tuition for special education^[2]. State aid for a district of this size and degree of poverty would be much greater if the students were enrolled in KJUFSD, which is a public school eligible for the full range of NYS school aid, and if the district were to receive state aid comparable to other districts with high poverty.

^[2] NYS Education Department, http://www.oms.nysed.gov/faru/Profiles/profiles_cover.html; The per pupil rate of \$62,000 is within the range of base tuition paid to BOCES for full-day special education, center-based programs, which is approximately \$55,000. BOCES tuition increases based on additional services required (i.e., 1:1 aide; speech services).

In FY13-14, the average state aid across districts across the entire income and wealth spectrum was just over \$9,000. Many receive much more—38 districts in NYS received at least \$15,000 per student in total state assistance (and averaged \$17,000). Given the large share of the KJUFSD residential population that is in poverty, it seems reasonable to assume that the district would receive among the highest aid per student in the state. Even at the statewide average, state aid would be nearly \$100 million. Were state aid per student set equal to that received by the City of Newburgh’s school district, total state aid to KJUFSD would be \$135 million. At state aid of \$15,000 per student, it would total about \$162 million. The complexity of the state aid formulas makes this a speculative exercise—it would take a significant investment of time and effort to develop the many assumptions required to place Kiryas Joel’s student body into a state aid context.

Therefore, while we cannot determine an actual amount of NYS education aid that KJUFSD would receive if Village children currently attending yeshivas were to enroll, we conclude that there is significant state cost savings to taxpayers in the area of state school aid as a result of near-total private school enrollment among the children of Kiryas Joel.

Finally, as discussed above, while much federal aid follows non-public students, most state aid, which constitutes the majority of funds for high-poverty districts, is based on public school *enrollment*, not the number of students resident in the district. Much of the cost of providing mandated services to non-public school students and the administrative costs associated therewith (e.g., transportation, student support services, health services) must be absorbed by the district of residence. In this instance, an increase in nonpublic school attendance among students resident in MWCSO would add cost but would increase state aid little or not at all.

Non-Financial Educational Issues

Substantially Equivalent Instruction

A longstanding conflict between religious communities and the larger society focuses on the content of the curriculum offered in religious schools. By statute, local boards of education are responsible for ensuring that non-public schools within their districts are providing “substantially equivalent instruction” to that received in public schools. *

* The New York City Department of Education recently announced that it was initiating an investigation into whether instruction at 39 yeshivas meets the

* State Regulation of Private Schools N.Y. Educ. Law §3204.2; see also §3204.3 (The statute indicates that that the course of study for the first eight years of public school include arithmetic, reading, spelling, writing, the English language, geography, United States history, civics, hygiene, physical training, the history of New York state and science. Beyond the first eight years, instruction is to include the English language and its use, civics, hygiene, physical training, American history including the Declaration of Independence and the Constitution of the United States.)

"substantially equivalent" standard.* Regardless of the findings however, state regulations governing these inquiries are silent as to any ultimate legal recourse a superintendent may have in the event that it is determined that the instruction is not substantially equivalent.

This same issue may be applicable to the yeshivas in KJUFSD and MWCSD. Based on interviews with Village, KJUFSD and MWCSD officials, it is our understanding that the boys enrolled spend the majority of their time in religious study and spend relatively little time on secular subjects. The girls, on the other hand, spend more time on secular subjects, reportedly receiving something close to high school equivalency in secular public schools

Regardless of New York's law, federal courts in the United States have been consistently willing to uphold the rights of homogeneously religious communities, including their right to instruct their children in a manner consistent with their religious beliefs and cultural norms. For example, in *Wisconsin v. Yoder*[†], the Supreme Court affirmed the right of the Amish to determine their own educational structure based on their religious and cultural values. Chief Justice Burger wrote that a "state's interest in universal education, however highly we rank it, is not totally free from a balancing process when it impinges on fundamental rights and interests, such as those specifically protected by the Free Exercise Clause of the First Amendment, and the traditional interest of parents with respect to the religious upbringing of their children so long as they, in the words of Pierce, 'prepare [them] for additional obligations.'"

Child Find Obligations under IDEA

The Individuals with Disabilities in Education Act (IDEA) requires that public school districts actively identify children who are parentally placed in a non-public school and may have a disability. In KJUFSD, the proportion of children of birth through pre-K children is commensurate with the overall population (as observed in the county-funded Early Intervention program (see the Health section of the report). However, the percentage of *school-age* children identified as having a disability is substantially lower than the state average (4% and 15% respectively in FY13), which can be attributed both to effective intervention at early ages and, possibly, to a reluctance to label children as having a disability.

* See http://www.nytimes.com/2015/08/01/nyregion/new-york-city-questions-english-math-and-science-taught-at-yeshivas.html?_r=0

[†] 406 U.S. 205 (1972). The Court found that the government's interest in the education of children was outweighed by the Amish's First Amendment Free Exercise rights.

Conclusions

Our Task

CGR and the Chazen Companies have devoted the past two months to conducting a wide range of interviews, reviewing many documents and analyzing demographic growth projections, service demand impacts of Kiryas Joel and the physical infrastructure limitations created by the Village of Kiryas Joel as it continues to grow. Our charge was to present the Orange County leadership with an independent assessment of these factors as it plans for the county's future.

Sustainable Growth is the Goal

Simple demographics, combined with deeply embedded cultural values and practices, suggests that new family formation among members of the Hasidic community will continue at its current rate with or without annexation. Constraints imposed by water supply and wastewater processing capacity, prevailing laws and the annexation decision itself as well as actions of neighboring communities will influence where these new families live.

Our build-out analysis presented above assesses the capacity of lands currently under the control of the Village or Orthodox Jewish landowners both inside and outside the Village. Higher densities within the annexation lands would reduce the pressure to increase density within the current Village boundaries or on the land owned by affiliated developers outside the Town of Monroe. Landowners willing to develop or sell land have well-established rights in their property that includes the ability to develop that property for housing—but within established legal limits. In addition, the leadership of the Hasidic community—like all communities—is entitled to pursue its internal obligation to provide housing for its current and anticipated future residents.

But these rights are not unlimited simply because this is a religious community. While it can choose to be set apart culturally, Kiryas Joel and the larger Orthodox Jewish community still must comply with laws passed by Orange County and the State of New York that are intended to ensure that growth is sustainable and balances the interests of all of the region's residents.

Embracing Smart Growth

The DGEIS for annexation prepared earlier on behalf of the Village of Kiryas Joel argues that the annexation and the development pattern it reflects is a manifestation of "smart growth." Yet smart growth is more than the inverse of sprawl. Smart growth embraces regional cooperation and engagement along with full respect for

environmental standards. The local control promised by NYS's Home Rule provisions has limits, particularly when environmental quality is **threatened**.

Kiryas Joel's expansion does not occur in a vacuum, nor should it occur without appropriate dialogue among the Village, its neighbors and Orange County. Many of the Village's neighbors make it abundantly clear that they prefer that the village not grow at all, a position that places them in direct conflict with cultural expectations and the municipality's plans. Instead of settling these matters in the courts, Orange County leaders would better serve taxpayers by working to establish a climate in which growth can occur with the cooperation of municipal, county, regional and state agencies.

Appendix

Wary Neighbors: Conflict of Cultures

Kiryas Joel's proposed annexation of 507 acres of unincorporated land in the Town of Monroe has surfaced every conflict and disagreement, every prejudice and fear that have long divided the village's Hasidic residents from many of their Orange County neighbors. There are legitimate, long-standing, grievances on both sides. The disposition of the annexation can either deepen distrust and inflame suspicion, or it can demonstrate the willingness of both sides to address the substantive issues the annexation raises. The goal of all should be to establish a foundation for ongoing, productive dialogue on matters of mutual concern. To date, disputes over expansion of the Village have been settled in the courts.

Set Apart

The Hasidic community is expressly committed to remaining separate, both physically and culturally, from the rest of Orange County. This is their right—freedom of association includes the freedom to *not* associate. Nonetheless, the lack of contact and trust between the groups makes it difficult for both to see challenges and opportunities through one another's eyes.

The Kiryas Joel leadership and its allies are quick to attribute the words and actions of adjacent communities to anti-Semitism, a reflex rooted in a centuries-long history of anti-Semitism and the roots of the Satmar community in the Holocaust. Given the context, this reflex is not that surprising. Those who oppose Kiryas Joel's expansion may indeed be motivated by a rejection of a community that is distinctly and intentionally "other," a reflex that may feel very much the same as prejudice based on Jewish heritage and may well have anti-Semitic roots for some individuals. Both groups reject the other's beliefs and lifestyle, which hardly forms the basis for productive collaboration.

That many county residents and leaders are reflexively opposed to Kiryas Joel's expansion is abundantly clear. Many Orange County residents have strongly and frequently expressed their desire to limit Kiryas Joel's growth and have taken actions that are transparently intended to confine Kiryas Joel to its current borders. As an example, the creation of the villages of South Blooming Grove and Woodbury appear to have been expressly designed to prevent the creation of another Orthodox Jewish village outside Kiryas Joel's boundaries. As has been noted by Kiryas Joel's supporters, this very study is unique—no other annexation has received this level of scrutiny (or expense) by Orange County.

History of the Hasidic Movement and the Establishment of Kiryas Joel

The roots of Hasidism lie in 18th-century Eastern Europe. At that time, religious and social power in Jewish communities was concentrated among a small number of leaders. Hasidism originated as a revivalist movement, a more populist and accessible strain of Judaism that emphasized the importance of the common individual as well as the scholarly elite.

The founder of Hasidism was Israel ben Eliezer, who would become known as the *Baal Shem Tov*, or "Master of the Good Name". He taught that divinity was present in everything, and that everyone should attempt to encounter God at all times and in all things. This was a significant departure from the established belief that intense study of the Torah was the only path to God.

His disciples refined his teachings and spread across Europe, and by the mid-19th century, the majority of Jews in Ukraine and central Poland were Hasidic.* These leaders, who would come to be known as Grand Rebbes, developed their own communities and strains of Hasidism. Their followers saw the Rebbe as a conduit between the community and God, and sought his advice and blessing on many matters.

The Satmar Community

Joel Teitelbaum was born in 1887, the second son of the Grand Rebbe of the town of Siget in Hungary. Upon his father's death in 1904, his older brother inherited leadership of Siget, and Teitelbaum moved to the town of Satmar, where he began to gather his own followers. He established himself as a fierce opponent of Zionism, both on religious grounds, as he believed Jews were to wait for the Messiah before reconstituting Israel, and political grounds, as he was opposed to the development of a secular or political Jewish identity that would take precedence over a religious one.†

In 1940, the German army invaded Hungary, and the Jews of Satmar, including Teitelbaum, were sent to a Nazi ghetto. Teitelbaum would eventually escape to Switzerland, and arrived in New York in 1946. An estimated 80% of Hasidic Jews died in the Holocaust.‡ Most of those Satmar that survived fled the battlegrounds of Europe and joined Teitelbaum in the United States, settling in Williamsburg, Brooklyn.

Many waves of European migrants had come to the US in the 1800s and first half of the 1900s and each ethnic group had, for the most part, assimilated after a generation or two, shedding many of their unique cultural traits. Hasidism would prove the

* Balog and Morgenstern, "Hasidism: A Mystical Movement Within Eastern European Judaism."

† "Rabbi Joel Teitelbaum Dies at 92; Leader of the Hasidic Community; Opposed State of Israel; Moved to Brooklyn in 1946."

‡ Menachem, "The Satmar Rebbe and the Destruction of Hungarian Jewry: Part 1."

exception, for several reasons. Hasidic Judaism had never been tied to a political or national entity, and so the shift from Europe to America meant less for them than it did for most ethnic groups. Instead, Hasidism was built around extremely powerful, charismatic leadership that remained in place in America. The Hasidic movement also placed an extremely strong emphasis on history and the past, visible in their patterns of dress and rituals of worship. That sense of the past's importance was only reinforced by Hitler's attempt to utterly destroy Judaism and all its history. As a result, the Satmar community retained its cohesion even after the move to New York.[§]

Kiryas Joel

Joel Teitelbaum died in 1979, and was succeeded by his nephew Moshe Teitelbaum. Two years prior, the new community of Kiryas Joel had gained official municipal status as a Village in the town of Monroe. Moshe appointed his oldest son, Aaron Teitelbaum, as chief rabbi of Kiryas Joel in 1984, and he was seen as the heir apparent to Moshe as Grand Rebbe of the Satmar. In 1999, however, Moshe recalled his third son, Zalman Teitelbaum, from his post in Jerusalem and made him the chief rabbi in Williamsburg.

Moshe died in 2006, and the Satmar community split over the question of his succession.** Williamsburg is dominated by the followers of Zalman, known as the "Zalis", and Kiryas Joel by the followers of Aaron, known as the "Aronis", though both groups are represented in both communities. In the past, schisms such as this have led to the development of two separate dynasties where there had been one.

Political Influence

Kiryas Joel has undergone rapid growth since its founding, and its political clout in Monroe and Orange County has grown similarly. In 1980, Kiryas Joel's population was less than 1% of the total population of Orange County, and 14% of the total population of Monroe; by 2010, those proportions were 5.4% and 50.5% respectively. When combined with the village's ability to vote as a block when issues demand it and very high rates of turnout – 69% for the 2010 Senate race, compared to 41% for Monroe outside Kiryas Joel and 36% for Orange County outside Kiryas Joel – these vote totals allow Kiryas Joel to play an outsized role in state and local politics. Orthodox Jewry has long had significant influence in New York State politics as well, an affiliation that provides the Village with additional political access.

The Village plays a decisive role in Town of Monroe elections. Residents of the town of Monroe elected a supervisor in 2013. While 87% of voters outside Kiryas Joel supported United Monroe's candidate for supervisor and only 8% supported the

[§] Daum and Rudavsky, *A Life Apart: Hasidism in America*.

** Powell, "Succession Unclear After Grand Rebbe's Death."

Independence Party's candidate, the near-unanimous support for the Independence Party's candidate within Kiryas Joel was decisive, 52% v. 45% in favor of the Independence Party.

Kiryas Joel voters are also influential in county elections. In the 2013 election for Orange County Executive, the Republican Party candidate won election by a comfortable margin of nearly 9,000 votes, including 6,480—all but 23—votes from Kiryas Joel. Had those votes been cast for the Democrat, the shift in support would have been decisive.

Assuming the same voter turnout both for Kiryas Joel and Orange County residents, the Village will strongly influence 15% of likely votes in County Executive elections by 2024 and 20% of likely votes cast by 2032. These shares are lower in Presidential years, as the turnout of non-Hasidic voters rises more than in Kiryas Joel.

Legal Context: Annexation Process & the Rights of Religious Communities

DISCLAIMER: The purpose of this section is to provide information about legal issues relating to the annexation. The information is for discussion purposes only and may not reflect the most current legal developments. These informational materials are not intended to be, and should not be taken as, legal advice.

Introduction

As discussed throughout this paper, there is a significant amount of distrust and history of litigation involving the Village, Orange County and many of the other surrounding towns and villages. Similar patterns can be seen in some neighboring counties in the Hudson Valley region. In the past five years, the Village has spent approximately \$2 million in attorneys' fees, which is slightly higher than the total amount spent by Orange County for the same time period.^{††}

CGR identified two recurring concerns when interviewing various county departments about their working relationship with the Village. First, the alleged lack of transparency in actions taken by the Village government make it difficult for the County to meet some of its obligations in an efficient and effective manner. For example, New York State's Open Meetings Law requires that notice of meetings be given to the news media and conspicuously posted in one or more designated locations.[‡] We consistently heard from county officials that no such notice is given or posted and, thus, the County cannot determine when actions, with respect to rezoning for example, are occurring. This, in turn, makes it difficult for the county to

^{††} See Open Book NY (www.openbookny.gov).

[‡] NYS Public Officers Law §104(1).

issue water permits, monitor sewer hookups and/or conduct analyses required under General Municipal Law (GML) §§239-m and 239-n, which is discussed in more detail below. Despite this complaint and no legal recourse, it is unclear whether and to what extent the County has taken steps to address this issue.

Another repeated concern by the County is the difficulty of distinguishing between actions taken by members of the Village leadership as to whether they are private (e.g., related to business or religious exercise) or public, in their official elected or appointed capacities. Many of the examples given related to environmental concerns. Again, whether the County has taken actions to redress this complaint remains unclear.

Other actions that appear to feed into the litigious nature of this community include the formation of United Monroe, which is actively fundraising in order to cover the costs of anticipated litigation relating to the annexation. United Monroe's stated goal is to keep things in the County "the same." However, nothing in the law supports a cause of action to prevent any expansion or growth from occurring.

Similarly, the incorporation of the villages of Woodbury and Blooming Grove appear to have been intended to prevent additional Village expansion. If true, such government actions may be subject to claims of federal constitutional and statutory violations as discussed in further detail below.

The Annexation Process

The Village of Kiryas Joel filed its annexation petition and notice of intent to establish lead agency in December 2013. Following a January 2015 determination* that Kiryas Joel would act as the lead agency in this matter, it made the DGEIS public in March 2015. The required hearing on the petition was jointly held by the Village and the Town on June 11, 2015 and the public SEQR hearing, which is an opportunity for the public to comment and ask questions regarding the DGEIS, was held on June 22, 2015.

General Municipal Law §711 requires a two-step analysis in order to determine the sufficiency of a petition for annexation: (1) whether the proper procedures for submitting the petition were followed; and (2) whether the action is in the overall public interest, which includes the potential economic, social and environmental impacts of the annexation.†

* See *Lead Agency Dispute: Town Board of the Town of Monroe v. the Board of Trustees of the Village of Kiryas Joel, Orange County, NY*, DEC Commissioner's Determination pursuant to Art. 8 of the Environmental Conservation Law, January 28, 2015.

† More specifically, §711 requires that, within ninety days after the hearing held pursuant to section seven seven hundred five is concluded, the governing board of each affected local government shall determine by a majority vote of its total voting strength whether the petition complies with the provisions of this article; and whether, on the basis of considerations that include, but are not limited to,

In order to make a determination as to whether the annexation is in the overall public interest in this matter, a State Environmental Quality Review (SEQR) process must occur. Like rezoning, annexation is likely to change land use patterns and, therefore, requires Kiryas Joel* to take a "hard look"[†] to determine the consequences of the annexation, and explain (provide a "reasoned elaboration"[‡]) why each impact is or is not potentially significant.[§]

SEQR broadly defines the term "environment" to include land, air, water, minerals, flora, fauna, noise, significant historic and aesthetic features, population patterns, and community character. Challenges to these determinations are discussed below.

To date, the Village has not its Notice of Completion of the FEIS or Findings Statement and therefore the Town has not yet been able to vote. If and when the votes take place and both entities vote in support of the petition, the annexation becomes final.^{**} If one of the governing boards (i.e., the Town of Monroe) determines by vote that it is not in the overall public interest to approve the proposed annexation, or believes that the procedural requirements for the petition were not met, the governing board of the other affected local government (presumably Kiryas Joel) may within 30 days apply to the Appellate Division of the New York State Supreme Court for adjudication and determination of whether the proposed annexation is in the overall public interest.^{††} Certain impacted parties (e.g., the school districts, fire districts and any owner of taxable property located in the territory proposed to be annexed) would have a right to intervene in the proceeding. Ultimately, the court will decide whether the annexation is in the overall public interest.

those relating to the effects upon the territory itself and the affected governments, school districts, fire districts, et. al., situated wholly or partly in such territory, it is in the over-all public interest to approve such proposed annexation.

* As the lead agency, Kiryas Joel is responsible for the environmental review process, including the EIS's preparation and for making findings as to the significance of the impacts identified therein. The FEIS must also include the lead agency's responses to all substantive comments and questions that were submitted in response to the DGEIS. Once the Village files a Notice of Completion of the FEIS, the Town of Monroe, as an involved agency, must wait ten days, and then adopt its findings (or adopt the Village's findings) and adopt its final decision on the action.

† "Hard look" means a systematic assessment of every potential impact. *SEQR: Guiding the Process*, http://www.dec.ny.gov/docs/permits_ej_operations_pdf/guidfnledits27409.pdf

‡ "Reasoned elaboration" means written articulation the conclusions reached regarding each impact, and the process by which the conclusion was reached. *SEQR: Guiding the Process*.

§ See 6 NYCRR 617.7(c) for the criteria to be used to determine whether an impact is "significant."

** Both governmental entities must vote by September 9, 2015. Failure to vote by the deadline constitutes an approval of the annexation petition.

†† See NYS GML §712.

Potential Legal Challenges to the Annexation

If both the Town of Monroe and the Village of Kiryas Joel vote in favor of the annexation, there are multiple parties that may have standing to pursue lawsuits*, and multiple grounds upon which to challenge the annexation. The overarching issue would be whether the annexation is in the overall public interest, and there are several arguments to be raised – both in support of, and in opposition to – the Boards' findings and decisions in support of the annexation. In these potential cases, discussed below, the Village and Town will bear the burden of proving that the annexation is within the overall public interest.

One challenge that has already occurred in this matter is the DEC determination that the Village of Kiryas Joel act as lead agency. Multiple entities (including the Town of Monroe, Orange County, and the Monroe Woodbury School District) requested lead agency status arguing that the Village was could not be objective in the process. The DEC awarded lead agency status to the Village, noting that "a municipality's possible motivation is not relevant" to lead agency disputes.†

Several parties may seek to challenge the sufficiency of SEQR review. Neighboring towns and villages and individual property owners can likely demonstrate that they have an interest in potential environmental impacts of the annexation and, thus, would have standing to bring such proceedings. Issues may include impacts on water quality and quantity, potential sewer overflow, and impacts on the character of the neighborhoods.

One common type of challenge in land use decisions is via an Article 78 proceeding seeking judicial review of the SEQR process. In these cases, the state court is limited to determining whether the challenged findings and decision were affected by an error of law, were arbitrary or capricious, an abuse of discretion, or the product of a violation of lawful procedure. The courts consider whether the lead agency identified the nature and extent of areas of environmental concern, including any secondary impacts, took a "hard look" at them, and made a "reasoned elaboration" of the basis for its determination. ‡ *Importantly, it is not the court's role to weigh the desirability of any action.*

Authority for village and town decisions in land use matters is rooted in Municipal Home Rule Law, which stands for the general proposition that municipalities have the authority to enact any local laws within their own jurisdictions that are not contrary to

* Parties with potential standing include, but are not limited to landowners within the annexation territories and neighboring municipalities (those with shared boundaries to the town or village).

† See *Lead Agency Dispute* decision, cited above.

‡ See definitions of "hard look" and "reasoned elaboration" in footnote X, above; see also, *Matter of Orange County v. Village of Kiryas Joel*, 44 AD3d 765 (2007).

a state law or the New York State Constitution. The State Legislature is specifically prohibited* from acting with respect to the "property, affairs or government" of any local government except by general law or by special law.†

In accordance with Municipal Home Rule Law, it is generally recognized that villages have unique governmental authority to define their community character, and protect the physical and visual environment.‡ Community character is specifically identified as a potential environmental concern in SEQRA.§ During CGR's tour of the Village of Kiryas Joel, when pointing out the water towers, the Village Administrator stated that his community has different opinions than others regarding what constitutes "beauty", suggesting that the community does not feel that the water towers negatively impact the character of the community. This is an example of a decision that is within the purview of the Village pursuant to the Municipal Home Rule Law.

However, neighboring communities and their residents also have a demonstrated interest in the actions of their neighbors based on a "potential threat to [their] community character."** "Substantial development in an adjoining municipality can have a significant detrimental impact on the character of a community...thereby limiting the ability of the affected municipality to determine its community character."†† Challenges have been brought by neighboring counties in cases similar to this one, where high-density housing is proposed in the midst of rural and low-density zones.

Counties also have a statutory interest in municipal land use actions, and GML §239-m requires the County to facilitate a regional review of land use proposals that are of interest to its broader community. If and when some or all of the territory is annexed into the Village, the Village will be required by GML §239-m to submit a referral to the Orange County Planning Department for review of the regional impacts of its proposed rezoning. According to the County Planning Department, the Village of Kiryas Joel has never (in at least the past 13 years), complied with this requirement.

Failure to refer a matter to the county pursuant to this section can be challenged in court in a declaratory judgment action to nullify the zoning law. Because this is a

* See N.Y.S. Constitution Art. IX, §2(b)(2).

† Special laws can be enacted at the request of two-thirds of the membership of a local legislative body or at the request of its chief executive officer, concurred in by a majority of the legislative body; or by a two-thirds vote of each house upon receiving a certificate of necessity from the Governor. See generally, http://www.dos.ny.gov/lg/publications/Adopting_Local_Laws_in_New_York_State.pdf.

‡ See Municipal Home Rule Law 10[1][ii][a][11]; In June 2015, Governor Cuomo vetoed a bill drafted by Assemblyman Skoufis that sought to give the county additional control over the annexation process on the grounds that it violated New York's State Constitution.

§ See ECL 8-0105[6] and 8-0109[2].

** See *Village of Pomona v. Town of Ramapo*, 94 AD3d 1103 (2d Dept. 2012).

†† See *Village of Pomona*, quoting *Matter of Village of Chestnut Ridge*.

"jurisdictional defect involving the validity of a legislative act,"* a six-year statute of limitations applies. In other words, and assuming the County is correct that the Village of Kiryas Joel has not submitted any §239-m referrals, any zoning laws enacted by the Village in the past six years can be challenged as invalid. To date, no such action has been taken.

Orange County may have standing to challenge a determination that the annexation is in the overall public interest based on its ownership of property in the annexed territory, the impact of overflow from the Village on the Harriman treatment facility, and numerous environmental impacts on County operations. Sewer overflow, water quality and quantity, and preservation of natural habitats (i.e., parks; trails) are all of concern to the County.

In New York, zoning "must be undertaken 'in accord with a well-considered plan' or 'in accordance with a comprehensive plan.'....Comprehensive has been defined as 'covering a matter under consideration completely or nearly completely: accounting for or comprehending all or virtually all pertinent considerations.'....Where a local government can show that suitable studies and deliberations preceded adoption of the zoning law amendment, the potential that a zoning action will be found to reflect comprehensive planning increases."† While municipalities are not required by law to have a written comprehensive plan, if they choose to adopt one or to amend their current plan, it is subject to the GML §239-m referral process discussed above. Again, if the Village has not referred its plan to the County, it could be subject to an action for declaratory judgment.

The Village of Kiryas Joel's comprehensive plan is codified in Chapter 155, Article 1 of its zoning laws. Compared to other written plans, the Village's is sparse at best. Notably, it speaks to elements of "smart growth" and recognizes the need to consider "conditions and trends both within the Village and in relation to adjoining areas."‡ Conversely, the Town of Monroe has a lengthy and recently updated comprehensive plan, and used the SEQR process as a reference for informing its decisions as to revisions. Its plan speaks to maintaining low-density zoning to preserve the environment. While there may be some basis for questioning whether the Village's presumed zoning of the annexation territory would comply with its comprehensive plan, such challenge seems unlikely to prevail, particularly in light of the extensive and thorough process undertaken in this action.

* *Ernalex Const. Realty Corp. v. City of Glen Cove*, 256 AD2d 336 (2d Dept. 1998).

† See *Zoning and the Comprehensive Plan*, pp. 5-6. New York State Dept. of State, available electronically at: http://www.dos.ny.gov/lg/publications/Zoning_and_the_Comprehensive_Plan.pdf

‡ See Kiryas Joel Village Law 155-2[B](1).

Potential Federal Civil and Constitutional Rights Claims

A continual theme that CGR has heard throughout our engagement is that the opposition to the annexation is due to anti-Semitism throughout the larger community. It is beyond the scope of this report to explore the veracity of those allegations, but the potential for lawsuits stemming therefrom is significant. The various governmental entities should recognize that they have an obligation to ensure their actions do not encroach upon religious freedoms and other constitutionally and statutorily protected civil rights.

State governments (including towns, villages, and counties) are prohibited from treating secular and religious organizations differently, on the face of the law or action, in its application thereof, or with intent to discriminate.* Where the government seeks to impose or implement a land use regulation in a manner that imposes a substantial burden on the religious exercise of a person, it must be in furtherance of a compelling governmental interest using the least restrictive means of furthering that governmental interest. Plaintiffs basing their action on the Religious Land Use and Institutionalized Persons Act (RLUIPA) who prove a violation are highly successful in recovering monetary damages and, significantly, attorneys' fees, even in cases that settle before trial. The local governments (notably Orange County and the Village of Woodbury) should have a thorough understanding of RLUIPA's application prior to taking any actions involving land use and religion.

42 U.S.C.A. §1983 and the 14th Amendment, which extends constitutional protection requirements to states, prohibits violations of the Constitution or federal law by a person acting under the color of state law. Specifically, monetary damages and attorneys' fees are awarded where a state or local policy or custom causes a plaintiff to be subjected to a denial of a constitutional right, such as the First Amendment's free exercise of religion clause. Similarly 42 U.S.C.A. §1985, via the 14th Amendment, prohibits state and local officials from conspiring to interfere with federally protected rights where there is discriminatory animus behind the actions. Again, monetary damages and attorneys' fees apply.

Finally, the Fair Housing Act[†] prohibits discrimination in the housing market by state and local officials. Developers can have standing to sue on behalf of potential tenants and buyers where the injuries were "distinct and palpable" and "fairly traceable." Importantly, the injury caused by the government action does not have to be economic.

* Religious Land Use and Institutionalized Persons Act, 42 U.S.C.A. 200cc et seq. (2000).

† 42 U.S.C.A. §3601 et seq.

Sustainable Development and Land Use

An emerging area of law, referred to as sustainable development law, appears to be rooted in the concept that desired land uses can and should be achieved within environmentally friendly (e.g., sustainable) frameworks.* Part of this framework includes the concept of “smart growth,” which is roughly described as planned communities with varied housing, and multi-use, walkable, residential and commercial areas. Integral to “smart growth” is the concept that these communities are good for the environment because, among other things, they prevent suburban sprawl thus preserving more green space.

According to John R. Nolon and others[†], the concept of “smart growth” began following a 1972 New York Court of Appeals decision, Golden v. Ramapo.[‡] In the 1950s and 1960s, the Town of Ramapo experienced a 300% population growth rate; at the same time, there was low-density suburban zoning, and officials were “struggle[ing] to change zoning...to absorb growth in a more creative and responsible manner.” What resulted was an 18-year master plan, throughout which the town was responsible for creating the infrastructure to support the growth and, in exchange, could control growth through nine key mechanisms that withstood judicial scrutiny:

- A Comprehensive Plan with an end date that resulted from a thorough planning process.
- Land development that was concurrent with, not in advance of, the necessary infrastructure.
- A special permits system for subdivision development to ensure adequate sewer, drainage, parks, roads and firehouses.
- As-of-right use under current zoning so that land had some economic use where sub-dividing was not an option.
- Tax assessment reductions for landowners who had to wait to develop.
- Acceleration options for developers willing to absorb some of the infrastructure costs (i.e., recreation facilities).
- Vested rights and developer agreements to prevent abuse of discretion.

* See generally, John R. Nolon. Shifting Paradigms Transform Environmental and Land Use Law: The Emergence of the Law of Sustainable Development, electronic copy available at: <http://ssrn.com/abstract=2212367>; and Creating the Community You Want: Municipal Options for Land Use Control, New York State Department of State, electronic copy available at: http://www.dos.ny.gov/lg/publications/Creating_the_Community_You_Want.pdf.

[†] John R. Nolon. Golden and Its Emanations: The Surprising Origins of Smart Growth (2006). Pace Env'tl. L. Rev. 757.

[‡] Golden v. Ramapo, 334 N.Y.S. 2d 138 (1972).

- Hardship variances for small parcel owners.
- 800 units of affordable public and subsidized housing.

The Ramapo plan failed, primarily because opposition to the plan by developers and landowners led to multiple village incorporations, rendering the Town unable to enforce the plan.* The Golden Court predicted as much.† Though Orange County and Village face very different circumstances today, including significant village incorporation throughout the county and the enactment and application of RLUIPA, the Ramapo plan can still be instructive as to ways of resolving the current issue without resorting to litigation.

The inter-municipal agreement between the Town of Warwick and three villages is also illustrative of proactive regional planning. Through mediation and significant public input, and over a period of at least ten years, the agreement aligns their comprehensive plans, funds the purchase of open land development rights, adopts smart growth and other zoning ordinances that balance sprawl, and combines their annexing and zoning policies.‡

* See Nolon, *Golden and Its Emanations*.

† *Golden v. Ramapo*.

‡ See John R. Nolon, *Smart Growth: Intermunicipal Innovation in Orange County*, N.Y.L.J., Dec. 18, 2002, at 5, available at <http://digitalcommons.pace.edu/lawfaculty/699>. See also, *Responding to Streams of Land Use Disputes: A Systems Approach*, Public Policy Institute at University of Montana and Consensus Building Institute (2007).

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