

# **APPENDIX H**

## **SOUTH LOOP DISTRICT AUAR MITIGATION PLAN**

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# SOUTH LOOP DISTRICT AUAR MITIGATION PLAN

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# **SOUTH LOOP DISTRICT AUAR MITIGATION PLAN**

## **1.0 INTRODUCTION**

This Mitigation Plan has been prepared as part of the Alternative Urban Areawide Review (AUAR) process for the South Loop District completed by the City of Bloomington as a substitute form of environmental documentation, as provided for in Minnesota Rules Chapter 4410.3610, Subpart 1. This mitigation plan updates the original *Airport South District AUAR Mitigation Plan* prepared in 2002 in accordance with the Environmental Quality Board's (EQB) Environmental Review Program, MN Rules 4410.3610 and the Minnesota EQB's memorandum entitled *Recommended Content and Format – Alternative Urban Areawide Review Documents* updated September 2008.

The AUAR identifies the impacts anticipated to result from future development anticipated to occur within the defined study area. The study area is comprised of the South Loop District (f/k/a Airport South District) in Bloomington which encompasses a 2,350-acre area bounded by I-494 and the Minneapolis-St. Paul International Airport on the north, TH 77 (Cedar Avenue) on the west, and the Minnesota River and the Minnesota Valley National Wildlife Refuge on the south and east. The AUAR development scenario has been updated since the original 2002 AUAR and Mitigation Plan was approved. The updated development scenario describes development anticipated to occur on twelve sites within the South Loop District through Year 2040. Section 6 of the updated AUAR provides a detailed description of the amount, type, and location of proposed future development.

### Purpose and Content

This mitigation plan identifies the actions to be taken by the City and/or other responsible parties to avoid or minimize environmental impacts and to mitigate for unavoidable impacts that could result from the development scenario examined in the AUAR. The purpose and content of the mitigation plan is outlined in the Environmental Quality Board (EQB) document, *Recommended Content and Format – Alternative Urban Areawide Review Documents* as follows:

*AUAR: The final AUAR document must include an explicit mitigation plan. It must be understood that the mitigation plan is a commitment by the RGU to prevent potentially significant impacts from occurring from specific projects. It is more than just a list of ways to reduce impacts – it must include information about how the mitigation will be applied and assurance that it will. Otherwise, the AUAR may not be adequate and/or specific projects may lose their exemption from individual review.*

*The RGU's final action on the AUAR must specifically adopt the mitigation plan; therefore the plan has "political" as well as a technical dimension.*

Based upon the guidelines summarized above, this Mitigation Plan provides the following information for each area of potential impact identified in the AUAR:

1. Summary of potential impacts;
2. Planned mitigation measures;
3. Identification of the agency/agencies involved in review/approval of mitigation plans;
4. Governmental programs that regulate impacts/mitigation;
5. Timeframes for implementing mitigation; and
6. Identification of party/parties with financial responsibility for implementation of the mitigation measures.

The sections below summarize the impacts and the mitigation measures related to specific resources and/or development activity. These include potential impacts related to implementation of new infrastructure required to accommodate proposed development; sensitive natural resources (e.g., bluffs); cultural resources; and airport-related impacts.

### Responsible Parties

- *City of Bloomington* - The responsibility for insuring the implementation of many of the mitigation methods identified in this plan lies with the City of Bloomington. In many cases, the City's development review process and approval of preliminary and final subdivision plans, site plans, grading permits, building permits, and such required for individual development proposals will serve as the step where measures to avoid impacts and/or specific mitigation plans and requirements are identified and reviewed. City approval of development plans involves executed agreements with the developer(s) that may prescribe efforts to reduce environmental impacts, mitigation to be performed for unavoidable impacts, and financial and regulatory assurances that the mitigation plans will be implemented. In addition, the City will inspect the development as it is constructed, or will, through other means ascertain that the prescribed measures are implemented. A summary of the City's standard development review process is provided in Section 7 below.
- *Other Agencies* - Agencies other than the City of Bloomington also have authority for determining compliance with regulations within their jurisdiction as part of their plan approval and permitting processes. The applicable regulations and responsible agencies vary depending on the type and location of impacts. Some of the agencies with jurisdiction related to potential impacts in the South Loop District include: the Minnesota Pollution Control Agency (MPCA); the Minnesota Department of Transportation (Mn/DOT); the Minnesota Department of Natural Resources (MnDNR); the State Historic Preservation Officer (SHPO); State Archeologist; Minnesota Indian Affairs Council; Native American tribal representatives; Metropolitan Council; the Lower Minnesota River Watershed District; the Richfield-Bloomington Watershed Management Organization; and Hennepin County.

- *Developers/Property Owners* – Ultimately, the party responsible for implementing mitigation measures in accordance with the City’s and other agency’s plan review and permit requirements is the developer and/or private property owner. They are responsible for obtaining all required permits and approvals and for providing mitigation required as part of those approvals.

## **2.0 INFRASTRUCTURE IMPROVEMENTS**

### **2.1 Summary of Infrastructure Impacts**

The updated AUAR development scenario describes development expected to occur in the South Loop District through Year 2040 or 2045. Improvements to roads, sewers, watermain, and other infrastructure will be needed to accommodate new development that will consist primarily of a mix of retail, office, hotels, and residential uses.

The updated development scenario projects a net reduction in the amount of development in South Loop compared with what was proposed in the 2002 AUAR development scenario. Generally, the projected land use changes result in more evenly dispersed traffic flows and reduced peak hour traffic volumes. On the other hand, more residential and hotel development will increase demand on water and sanitary sewer systems resulting in the need for increased capacity.

Specific infrastructure impacts and mitigation activities related to future development are described below. Given that development may occur at different times or in different amounts than assumed in this AUAR update, the actual need for specific infrastructure improvements will be evaluated as the AUAR is routinely updated every five years to adjust timing assumptions as actual development proposals are entitled and more accurate development timing information becomes available.

#### **Traffic/Road Infrastructure Impacts**

New traffic generated by future development in the South Loop District combined with existing background traffic result in traffic volume increases on roadways in and adjacent to the study area through 2040 and beyond. As traffic volumes increase, impacts on traffic operations on area roadways will need to be mitigated. The traffic study conducted for the South Loop District for this updated AUAR analyzed existing conditions and traffic impacts resulting from Year 2025 and Year 2040 forecast development. Given the speculative nature of development forecasts this far into the future, this mitigation plan focuses on traffic/road impacts through 2025.

It is also recognized that greenhouse gas emissions from vehicles is Bloomington’s second largest contributor to climate change. Infrastructure to incentivize alternative transportation modes and support electric vehicles will be needed to mitigate the GHG impacts of traffic volume increases.

## **Sanitary Sewer Impacts**

Hydraulic modeling and capacity analysis of Bloomington's sanitary sewer system to accommodate future development in the AUAR study area indicates additional capacity will be needed in several of the mainline sewer segments to accommodate total forecast development out to year 2040 and beyond.

The modeling and analysis indicates that the total average daily sewer flow rates (out of the South Loop District) could increase the existing flows by about 1.5 times in year 2040 and beyond. Pipes where modeled flow levels exceeded 75% full, under peak flow conditions, were considered unacceptable and the associated pipe systems were examined for potential upgrades.

## **Water Distribution System Impacts**

Average day water demand in the AUAR development scenario is expected to increase by 1.9 million gallons per day above current demand. As redevelopment occurs, new distribution piping will be needed for local service for both supply and fire protection. In order to provide reliable supply at adequate pressures during high demand periods or fire events, a transmission main has been identified to be replaced with a larger capacity main.

## **Groundwater and Well Impacts**

There are existing private water supply wells located on some of the development parcels (e.g., Kelley Farm property) that will need to be sealed when the property redevelops.

There are also currently two industries in the South Loop District that utilize private wells to supplement their public water supply to operate production facilities: Polar Semiconductor and SkyWater Technology. Both have obtained DNR appropriation permits. Any expansion of groundwater appropriation for these industries would need to be reviewed by the DNR for impacts on groundwater levels, surface water levels and potential impacts to protected features such as fens, trout streams (if so designated), as well as surface water quality.

## **Stormwater/Surface Water Impacts**

While the updated AUAR development scenario includes more future redevelopment sites than the 2002 AUAR, the amount of impervious surface resulting from anticipated future development is not expected to be significantly more than what was proposed in the 2002 AUAR – or that exists today. This is largely due to the high amount of impervious coverage currently existing in the South Loop District. All redevelopment sites in the AUAR study area are currently, or have been developed with urban/suburban development, except the Kelley Farm site. This site was identified as a redevelopment site in the original 2002 AUAR and all subsequent updated AUAR development scenarios and has long been guided and zoned for commercial development.

Given the existing amount of impervious coverage, proposed development should not significantly increase the amount of stormwater discharge under normal conditions when compared to existing conditions. Redevelopment may provide opportunities to increase the amount of pervious surface area and implement stormwater Best Management Practices (BMPs) to improve stormwater management regarding quantity and/or quality. New development must meet the City's stormwater requirements, which decrease runoff rate and volume, while increasing water quality treatment.

Surface Water Quantity Impacts – A citywide stormwater model update was completed in 2017 to align the City's hydrologic and hydraulic stormwater models to reflect the National Oceanic and Atmospheric Administration's (NOAA) revised precipitation frequency estimates ("Atlas 14"). The results show significant increases in rainfall amounts in the Twin Cities area where the 100-year, 24-hour rainfall depth increased by approximately 25% when compared to U.S. Weather Service data from 1961, used previously.

Since the last AUAR update, modifications have been made to reduce flood risks at the MOA Transit Station. The remaining area experiencing existing flooding that could be exacerbated under future conditions includes:

- *Pond 30* – Modeling indicates this existing pond located on the Adjoining Lands (MOA Phase 3 site) currently retains stormwater from the local sub-watershed as well as backflow from the 24<sup>th</sup> Avenue trunk storm sewer system. Reconfiguration of Pond 30 is anticipated with redevelopment of the Adjoining Lands (MOA Phase 3).

Surface Water Quality Impacts - Results of the 2008 South Loop District drainage model update provided an assessment of existing conditions and concluded:

- Through on-site and regional BMPs and naturally occurring wetlands, approximately 52% of the annual total phosphorus was removed from the Smith Pond and South Loop Drainage Districts; and
- Approximately 80% of the total suspended solids (TSS) loads generated are removed from the Smith Pond and South Loop Drainage Districts prior to discharge to downstream Long Meadow Lake.

In addition, a non-degradation pollutant load assessment report was completed in 2007 that measured changes in stormwater volume, total suspended solids, and phosphorus from 1988-2007 and 2007-2020. The results of this load assessment were incorporated into a non-degradation report that includes best management practices (BMPs) to be implemented to reduce pollutant loadings back to 1988 levels or lower.

Stormwater standards have become more restrictive than what was assumed in the 2008 model. The Minnesota Pollution Control Agency replaced the non-degradation water quality rules with new anti-degradation rules in 2015. The City meets these rules through post-construction stormwater management requirements in the CSWMP.

## 2.2 Summary of Infrastructure Mitigation Measures

Mitigation measures recommended to alleviate impacts to specific infrastructure systems are described below. The City will continue to work cooperatively with its partners regarding the feasibility and design of specific infrastructure projects.

### Traffic/Road Infrastructure Mitigation

Upgrades to the transportation infrastructure located within the South Loop District, as well as infrastructure beyond the district, will be required to accommodate projected future development. Mitigation measures are described below specific to the regional and local transportation systems.

### Regional Transportation System Mitigation

Increasing the intensity and walkability of development within the urbanized areas of the region, particularly areas with good transit service, is one of the objectives of the Metropolitan Council's regional growth policies. The high-intensity/mixed use type development envisioned for the South Loop District is consistent with these policies. However, this level of development can result in additional vehicle trips that may increase pressure on the regional transportation system serving the South Loop (e.g., I-494, TH 77) and increase GHG emissions. Efforts to mitigate traffic congestion on the regional system resulting from vehicle trips into and out of the South Loop are described below.

- *Transit-Oriented/Mixed Use Development* - The South Loop District contains a concentration of mixed uses that increase the potential for "multiple purpose" trips that help reduce the total number of individual trips generated by development within the district. For example, the MOA has documented a reduction in site trips (compared to standard ITE trip generation estimates) due to a combination of shared trips at this multi-use facility and the proximity of transit service.

The South Loop District is well served by high-frequency transit service, which increases the potential for visitors, employees, and residents to use transit to get to/from other areas of the region. The availability of frequent transit service reduces local and regional traffic impacts related to the future development. All of the sites anticipated for future redevelopment are located less than a ½ mile from one of the four Blue Line LRT stations in the district and most are located within ¼ mile of a station.

Currently 12 bus transit routes serve the South Loop, many through the MOA Transit Center and the 28<sup>th</sup> Avenue Park N Ride, and provide access to locations throughout the metro area. The MOA Transit Center is the busiest transit hub in Minnesota, by any metric. In 2016, the transit center served 2.6 million transit trips and the MOA reports that 20% of their workers use transit to get to work.



Trip generation estimates used in the AUAR traffic study are based on standard ITE trip estimates for all projected development outside the MOA. Standard ITE trips reflect trips associated with singular uses and may under-estimate potential multiple purpose trips. The types, intensity, and proximity of land uses proposed for future development in South Loop have high potential to foster multiple purpose, pedestrian/bicycle, and transit trips, thus decreasing actual traffic demand below the estimates included in the traffic analysis. The South Loop District Plan (SLDP) identifies several roadway enhancements to enhance the pedestrian and bicycle environment, including the potential to incorporate grade-separated crossings in certain areas. These ideas will be examined further when the SLDP is updated in the next year or two.

- *Regional/Freeway Wayfinding* – Six dynamic, electronic wayfinding signs were installed in 2011 on the freeways adjacent to the South Loop District. Information on the signs guides traffic in “real-time” to underutilized and less congested entrances to the District. This increases the traffic handling capacity of existing roadways in the District by directing motorists to underutilized roadways during peak traffic periods. The City currently requests MnDOT to change the sign message from a predetermined and pre-approved set of messages.
- *Travel Demand Management (TDM)* - Developers and employers in the developing/redeveloping areas of South Loop can assist in promoting use of transit, walking, biking, and other TDM measures. The City of Bloomington requires preparation of a TDM plan for developments 300,000 square feet in size or larger. City staff will work together with developers and employers to identify TDM measures appropriate for future developments, including, but not limited to:
  - Maximizing transit accessibility to the site
  - Promoting use of transit by employees and/or customers by providing transit information and/or incentives through Metro Commuter Services
  - Promoting carpooling by employees through Metro Commuter Services
  - Flexible work hours and/or telecommuting, to minimize peak period demand
  - Promote bicycle and pedestrian-friendly site development and connections to transit services, to encourage biking/walking trips
  - Encourage provision of electric vehicle infrastructure (charging stations)
  - At move-in, alert employees to alternative access points to adjacent freeways and alternative regional roadway options for travel
  - Promote the regional Guaranteed Ride Home program for transit and carpool users

Multiple transportation studies have been conducted for the South Loop area given it has been home to several regional destinations since the 1960s. The 1985 *Mall of America EIS* projected traffic demand from both Phase 1 (existing) and Phase 2 (expansion) development and recommended local and regional roadway improvements to support the

demand. Over the past 25 years, the City of Bloomington has participated in implementing many of the roadway improvements identified in the 1985 *Mall of America EIS* recommendations.

Other substantial improvements to the regional system have been made, including:

- *I-494 Alternative* - Various studies and analyses of demand and capacity on I-494 identified the need for a parallel local roadway system to accommodate local trips. The parallel arterial system was developed by the cities of Bloomington, Richfield and Edina to reduce the effects of increasing congestion on I-494 by providing an alternative for local and sub-regional trips. This arterial system serves demand for shorter trips along I-494 as well as potentially reducing demand in the I-494/I-35W interchange. American Boulevard (f/k/a 79<sup>th</sup>/80<sup>th</sup> Streets) functions as the parallel arterial in Bloomington and was designed to meet the demand of proposed development in the South Loop District. Improvements on the north side of I-494 (76<sup>th</sup>/77<sup>th</sup> Streets) have or will be implemented by the cities of Richfield and Edina.
- *I-494/34<sup>th</sup> Ave Interchange* – In 2013, a diverging diamond interchange was opened to simplify traffic operations at this interchange. It allows right and left turn movements onto freeway entrance ramps to occur unopposed and without stopping.

### **Local Transportation System Mitigation:**

A comprehensive traffic study was prepared in conjunction with the original 2002 AUAR. Since then, traffic updates have been completed, typically in conjunction with specific development proposals such as the MOA Phase 2 expansion in 2006. The traffic study referenced in this AUAR update analyzed traffic impacts resulting from development in three snapshots in time: 2016, 2025, and 2040. Given the challenge in accurately predicting future development, the traffic study focuses on specific roadway system improvements needed to accommodate proposed near-term South Loop development. Not all development forecast in the traffic study by 2025 has occurred and thus, some projects will occur after 2025. Project timeframes noted below reflect timing anticipated in the most current 10-year Capital Improvement Program.

Road improvements needed to mitigate traffic from projected near-term development are described below. The City will continue to work with state, regional, and local partners in considering the design and feasibility of these projects.

- **I-494 & 24<sup>th</sup> Ave Interchange (2026):** Construct dual northbound right turn lanes onto eastbound I-494 ramps; signal timing improvements and possible ramp signalization.
- **I-494 & 34<sup>th</sup> Ave Interchange (2026):** Construct dual northbound right turn lanes onto eastbound I-494 ramps; eliminate the eastbound free right at American Boulevard/34<sup>th</sup> Avenue by either adding a yield or bringing the turn lane into the intersection at 90 degrees; signal timing improvements and ramp signalization.
- **Lindau Ln at IKEA Way and 22<sup>nd</sup> Ave:** Modify southbound right “cat-tracking” at Lindau Lane/IKEA Way into the two south lanes; add southbound right “cat-tracking” into the two

south lanes at Lindau Lane/22nd Avenue; update signal cycle lengths/splits; modify wayfinding signage.

- **American Blvd at International Dr and Metro Dr East (2031):** Modify American Boulevard/International Drive intersection to three-quarter access; construct a roundabout at American Boulevard/Metro Drive East intersection.
- **24<sup>th</sup> Ave Corridor (Between I-494 and 82nd St) (2028):** Develop a concept layout to better utilize the existing roadway width; includes restriping/median work, removal of channelized right turns, removal of add-in lanes, access control, and pedestrian improvements.
- **E Old Shakopee Rd & 28<sup>th</sup> Ave:** Construct a multi-lane roundabout.
- **E Old Shakopee Rd & 33<sup>rd</sup> Ave:** Pedestrian crossing improvements.
- **American Blvd E & 30<sup>th</sup> Ave (2031):** Install a signal.
- **American Blvd & 28th Ave:** Repurpose lanes on south approach to better utilizing existing roadway width.

### **Sanitary Sewer Mitigation**

The City's current *Wastewater and Comprehensive Sewer Plan (WWCSP)*, which is a supplement to the City's Comprehensive Plan (adopted in 2019), used a series of computer models to identify sewer mains that need capacity improvements to serve estimated additional flow from anticipated future development. The collection of all these capital improvement items forms the basis of Bloomington's Wastewater Capital Improvement Program (CIP).

The estimated flows for the revised AUAR development scenario were entered into these sewer models, which identified six CIP work items for future sewer upgrades. These proposed future CIP items are shown in the AUAR (Table 12.2 and Figure 12.6). These items will address capacity issues associated with the pipe segments in the study area that were identified as "critical" by the computer models. Work item (CIP-12) is currently in design and is intended to be constructed in 2022. The remaining items will be constructed as additional sewer capacity is needed for approved future development and as funding sources are realized.

### **Water Distribution System Mitigation**

The City has a DNR mandated *Water Supply Plan*, approved in 2017, that implements long term water sustainability, conservation, and critical emergency preparedness measures. The City also adopted a Critical Water Deficiency ordinance that defines procedures to restrict water usage under certain emergency declarations. The City's water conservation activities are reviewed and documented annual during DNR Water Conservation Reporting.

Based on forecasts for the AUAR development scenario, approximately 2,640 linear feet of new 16" diameter trunk water main should be constructed in or about 2025. While this new water main is located entirely outside of the South Loop District, it supplies water to distribution pipes inside the South Loop District. As development proceeds, local

distribution pipes will need to be added to interconnect with, and strengthen, the existing pipe network. Some additional distribution piping and some larger trunk water main may also be needed for system reliability and to insure adequate pressures and fire flow to hydrants during high demand days. Extension of the water system into the Kelley property will be required to support the proposed development. No additional improvements to the City's water system are required to support the updated AUAR development scenario.

The system improvements identified in the City's *Water Supply Plan* are programmed in the City's Ten-Year Capital Improvement Program (CIP), which is updated annually. The City is currently developing a full-pipe model of the distribution system. This will help identify system requirements as they are needed.

### **Groundwater and Well Mitigation**

Sealing of existing private wells must be done in accordance with Minnesota Department of Health (MDH) procedures and requirements. The City has records of private well locations (drinking, dewatering and monitoring) and status because of its history of permitting and inspecting wells since the 1950s. The City has procedures in place to properly locate unknown wells and have them sealed before demolition permits are issued. Currently, there are no active enforcement cases regarding ground water contamination.

There are currently two industries in the South Loop District that utilize private wells to supplement their public water supply to operate their production facilities: Polar Semiconductor and SkyWater Technology. Both have obtained Minnesota Department of Natural Resources (DNR) appropriation permits. Any expansion of groundwater appropriation for these industries would need to be reviewed by the DNR for impacts on groundwater levels, surface water levels and potential impacts to protected features such as fens, trout streams (if so designated), etc., as well as surface water quality. This review, and its findings, would require approval by both the DNR and the MPCA. Because the water supplied by these private industrial wells is isolated from the public water supply system, it is not expected to affect future water demand from the public system.

### **Stormwater/Surface Water Mitigation**

The stormwater quantity and quality model prepared for the 2002 AUAR identified several stormwater management projects and best practices to improve stormwater quality and better manage stormwater quantity. Many of these have since been implemented and are described in Section 12 of the AUAR. Since the 2002 AUAR was approved, the City has updated many of its surface water plans and regulations.

The South Loop stormwater quantity and quality model was updated in 2008 and 2012. The City's Storm Water Pollution Prevention Program (SWPPP) and Comprehensive Surface Water Management Plan (CSWMP) have been updated, along with updates to State and Federal regulations, including a citywide water quantity model update in 2017 to reflect updated precipitation data (aka "Atlas 14").

The Bloomington *Comprehensive Surface Water Management Plan* (CSWMP) requires all new development/redevelopment to maintain surface water discharge rates at or below existing levels. It also recognizes the potential threats from climate change and the need to address increased flooding, more intense storm events, and warmer winters, which create more freeze/thaw cycles. Key items from the updated CSWMP that apply to all development in the City, including the South Loop District, include:

- For new development projects, Bloomington requires no net increase from pre-project conditions (on an annual average basis) of stormwater discharge volume, stormwater discharges of Total Suspended Solids (TSS), and stormwater discharges of Total Phosphorus (TP).
- For re-development projects, Bloomington requires a net reduction from pre-project conditions (on an annual average basis) of stormwater discharge volume, stormwater discharges of TSS, and stormwater discharges of TP.
- Surface water discharge rates from new development and redevelopment on sites disturbing less than 5,000 square feet of land must be reviewed by the City Engineer.
- Surface water discharge rates from new development and redevelopment on sites that disturb 5,000 sq-ft of land and/or 50 cubic yards of earth material must manage peak runoff rates to achieve rates equal to or below existing rates.
- In the design and construction of new, or modifications to existing storm water conveyance systems, treatment of all storm water runoff from the parcel shall be treated to at least sixty percent (60%) annual removal efficiency for total phosphorus, and at least ninety percent (90%) annual removal efficiency for total suspended solids.
- Sites that disturb land of more than 50 cubic yards or 5,000 square feet of new and/or fully reconstructed impervious surface must capture and retain on-site, a volume equivalent to 1.1 inches of runoff from the new and/or fully reconstructed impervious area.

It is noted that construction stormwater permits are required for new development and BMPs are tailored to address the specific circumstances and needs of individual projects and sites. The City routinely implements a variety of BMPs and will continue to work with our partners to ensure our BMPs are effective and meet or exceed State requirements. The City is committed to work in cooperation with other permitting agencies regarding identification and implementation of additional mitigation approaches as needed.

The City prepared a non-degradation pollutant load assessment report in 2007 and is committed to implement the recommended BMPs, including:

- Infiltration requirements for new development/redevelopment;
- Completion of a natural resources inventory;
- Water quantity/quality modeling updates;
- Gully inventory (Minnesota River Bluff); and

- Regional infiltration.

The Minnesota Pollution Control Agency replaced the non-degradation water quality rules with new anti-degradation rules in 2015. The City meets the anti-degradation rules through post construction stormwater management requirements detailed in Section 4 of the CSWMP.

In addition, development within the City's Bluff Protection Overlay District must ensure that post-development over-the-bluff storm water discharge rates are no greater than pre-development discharge rates. Three sites proposed for future development about the Minnesota River bluff and must comply with these regulations, including: Kelley Farm, Long Meadow Circle, and Apple Tree sites.

### Flood Mitigation

All development must comply with our CSWMP requirements, which were updated to align with Atlas 14 data. The results show significant increases in rainfall amounts in the Twin Cities area where the 100-year, 24-hour rainfall depth increased by approximately 25% when compared to U.S. Weather Service data from 1961, used previously. To address increasing flood vulnerability, the City is currently working with our local watershed districts and other agencies to assess vulnerabilities from potential future "mid-century (e.g., 2050)" rainfall events. The City will continue to work with our partners to identify strategies to address changes to rainfall frequency and intensity.

The redevelopment site with the highest potential for flooding is the Adjoining Land site (MOA Phase 3) as described below:

- *Pond 30* – Reconfiguration or removal of Pond 30 (see AUAR Figure 12.8), an existing "dry pond" located on the Adjoining Lands site, is anticipated with future redevelopment. Modeling indicates Pond 30 currently retains stormwater from the local sub-watershed as well as backflow from the 24<sup>th</sup> Avenue trunk storm sewer system. Modelling indicated that alternative infrastructure modifications evaluated could successfully mitigate flood elevation increases resulting from reconfiguration of Pond 30. Redevelopment plans for sites that currently drain to this area should include significant rate control best management practices to mitigate the effects of Pond 30 reconfiguration or removal. In addition, volume control will be required consistent with the CSWMP to mitigate the effects of additional flow volumes on the system.

Erosion Mitigation - Proposed development is not anticipated to result in unique and/or unusual earthwork requirements; however, the potential for erosion and sedimentation of soils exposed during development will be minimized by using the appropriate Best Management Practices (BMPs) during and after construction. These practices will be identified in the final construction and site grading plans as required by NPDES permitting for construction sites and in accordance with the City's and the Watershed District's erosion/sediment control standards. After construction, all disturbed areas will be either vegetated to eliminate exposed soil surfaces or surfaced in accordance with approved

development plans.

Development in the South Loop District is also subject to review by the two watershed management organizations with jurisdiction in South Loop: the Richfield Bloomington Watershed Management Organization; and the Lower Minnesota Watershed District. Figure 12.2 illustrates the boundaries of their physical jurisdiction in the South Loop. Both have adopted new goals and policies that will have an effect on the character and form of future development.

- *Richfield Bloomington Watershed Management Organization* has updated their Watershed Management Plan and now has a policy that encourages low impact development (LID) and enhanced infiltration practices to limit total suspended solids, surface water runoff volume, and phosphorus to 1988 levels.
- On October 24, 2018, the *Lower Minnesota River Watershed District* adopted their third generation Comprehensive Watershed Management Plan (2018-2027). On February 19, 2020, the LMRWD adopted Rules to govern soil erosion and sediment control, floodplain and drainage alteration, stormwater management, and development on steep slopes. Also in 2020, Bloomington received a Municipal Permit from the LMRWD delegating authority to the City to implement Rules pertaining to erosion and sediment control, stormwater management, and development on steep slopes.

Smart Salting - The City’s MS4 Permit requires public education on impacts of salt use. The City partners with local watershed districts to conduct and host “smart salting” classes. We also publish information in our community newsletter (Bloomington Briefing) and via social media. The City participates with local watershed districts as part of the Hennepin County Chloride initiative (HCCI) to educate property owners and managers on the impacts of salt use and provide resources to decrease salt use. It is further noted that the City currently has policy in place to reduce salt/chloride use on public streets and property as part of its snow and ice removal efforts.

### 2.3 Infrastructure Mitigation Implementation Information

The table below summarizes the responsible parties and general timing related to implementation of mitigation measures specific to infrastructure improvements required to accommodate forecast development in the South Loop District.

	<b>Agency(s)</b>	<b>Programs</b>	<b>Timing</b>	<b>Financial Responsibility</b>
<b>Traffic/Roads</b>	<ul style="list-style-type: none"> <li>• City of Bloomington</li> <li>• Mn/DOT</li> <li>• Hennepin County</li> <li>• Metropolitan Council</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision review</li> <li>• Development review</li> <li>• Contiguous plat review (Mn/DOT &amp; County)</li> <li>• Joint MnDOT/Met Council Interchange Planning Review Committee</li> </ul>	As required by increases in traffic volumes.	<ul style="list-style-type: none"> <li>• Private developers (based on traffic generation source and benefits accrued)</li> <li>• City of Bloomington</li> <li>• Hennepin County</li> <li>• MnDOT</li> </ul>

	<b>Agency(s)</b>	<b>Programs</b>	<b>Timing</b>	<b>Financial Responsibility</b>
<b>Sanitary Sewer</b>	<ul style="list-style-type: none"> <li>• City of Bloomington</li> <li>• MCES</li> <li>• MPCA</li> <li>• Mn Dept of Health</li> </ul>	<ul style="list-style-type: none"> <li>• Development review</li> <li>• Bloomington Wastewater and Comprehensive Sewer Plan (WWCSP)</li> <li>• Wastewater Capital Improvement Program (CIP)</li> </ul>	As required by actual development staging.	<ul style="list-style-type: none"> <li>• Private developers (via assessments)</li> <li>• City of Bloomington</li> <li>• Potential future City SAC program</li> </ul>
<b>Watermain</b>	<ul style="list-style-type: none"> <li>• Mn Dept. of Health</li> </ul>	<ul style="list-style-type: none"> <li>• Development review</li> <li>• Bloomington Water System Master Plan</li> <li>• Water Capital Improvement Program (CIP)</li> </ul>	As required by actual development staging	<ul style="list-style-type: none"> <li>• Private developers (via assessments)</li> <li>• City of Bloomington</li> </ul>
<b>Wells</b>	<ul style="list-style-type: none"> <li>• City of Bloomington</li> </ul>	<ul style="list-style-type: none"> <li>• Demolition permit review</li> <li>• Mn Dept of Health procedures and requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Property transfer</li> <li>• Private request</li> </ul>	<ul style="list-style-type: none"> <li>• Private property owner</li> </ul>
<b>Stormwater /Surface Water</b>	<ul style="list-style-type: none"> <li>• City of Bloomington</li> <li>• Lower Mn River Watershed District</li> <li>• Richfield-Bloomington Watershed Management Organization</li> <li>• Mn/DNR</li> <li>• USFWS</li> <li>• MPCA</li> </ul>	<ul style="list-style-type: none"> <li>• Development review</li> <li>• Grading permit review</li> <li>• Bloomington <i>Comprehensive Surface Water Management Plan</i> (CSWMP)</li> <li>• <i>Lower Minnesota River Watershed District Plan</i></li> <li>• Richfield-Bloomington <i>Watershed Management Plan</i></li> <li>• National Pollutant Discharge Elimination System (NPDES) program (MPCA)</li> <li>• Water Appropriation Permit program (Mn/DNR)</li> </ul>	As required by actual development staging and/or in conjunction with permit review and construction	<ul style="list-style-type: none"> <li>• Private developers (on site mitigation)</li> <li>• City of Bloomington</li> <li>• WMOs and/or Watershed Districts</li> </ul>

Funding for public infrastructure improvements will come from one or more of the following sources:

- Proportionate share payment by developers within the AUAR area as stipulated in the Developer’s Agreement.
- Special assessments of adjacent benefiting property owners.
- Joint powers agreements with affected agencies.
- City major capital funds.
- South Loop Tax Increment Financing may be used for select projects to be determined on a case specific basis.
- South Loop Redevelopment Fund may be used for select projects to be determined on a case specific basis.



- Staff has been working on building a citywide Sewer Availability Charge (SAC) program. If and when approved, all development will pay a fair share sewer access charge based upon their type of use in accordance with the current Metropolitan Council SAC parameters.

### **3.0 BLUFF PROTECTION**

The South Loop District is bordered by the Minnesota River Valley on the east and south. Much of the area in the river valley is located within the Minnesota Valley National Wildlife Refuge, owned and managed by the U.S. Fish and Wildlife Service, and is zoned and designated for conservation land uses. The bluffs of the river valley separate the upland areas where urban development may occur from the floodplain and ravine areas that cannot be developed. The bluff borders the AUAR study area, extending from the southwest to the northeast corners. Slopes in the bluff area range up to 35 percent and are composed of erodible soils.

#### **3.1 Summary of Impacts**

Four of the sites identified for redevelopment through 2040 abut the Minnesota River bluff, although one was recently redeveloped. Portions of all these sites are located within the City's Bluff Protection Overlay district and are subject to additional development standards to minimize physical and visual impacts to the bluff environment. The other parcels slated for redevelopment within the AUAR study area are not located in the bluff protection overlay district or adjacent to steep slopes.

#### **3.2 Mitigation Measures**

The City has adopted plans and ordinances to protect and minimize development impacts on sensitive natural resources related to the Minnesota River valley bluffs and bottomlands. These include:

- *Minnesota River Valley Natural and Cultural Systems Plan*, adopted in 2018 as a follow up to the Minnesota River Valley Strategic Plan (2016), this plan identifies areas in the River Valley that are of highest priority for protection and describes a variety of management strategies. The plan focuses on city-owned land below the bluffline (approximate 760-foot elevation), much of which is located within the Minnesota Valley National Wildlife Refuge (MVNWR) and guided for conservation uses.
- *Bluff Report District Plan*, adopted in 1982, set the foundation for establishment of bluff district overlay zoning and design guidelines for development on or near the bluff.
- *Bluff District Overlay Zoning Districts (BP-1 and BP-2)* were adopted in 1982 to regulate development activities in the bluff zone. These standards were revised in 2020 to align with updated watershed district requirements.
- *Flood Hazard Overlay Zoning District (FH)* was adopted in 1982 to regulate development activities in floodway, flood fringe, and flood plain areas.

- *Shore Area Regulations* were adopted in 1993 to protect the natural characteristics of shore areas and adjacent water areas, prevent pollution of surface and grounds waters, and minimize flood damage.

Most applicable to the sites in the AUAR redevelopment scenario that abut the bluff are the *Bluff Protection Overlay District* regulations. These apply to land along the bluff between the Minnesota River floodplain and the 800-foot elevation, as well as areas with steep slopes as defined by the watershed district. Regulations to minimize development impacts on the bluff include: restrictions on tree and vegetation removal; increased bluff set-back requirements; impervious surface coverages limits; requirements to maintain storm water discharge rates at or below pre-development over-the-bluff discharge rates; and requirements for City permitting (including requirements for erosion control and stabilization measures) prior to excavation, filling or grading in the area.

The City will also continue to work with developers to achieve high quality and low-impact site design. We will consider receipt of required park dedication as land (rather than cash) to enhance buffer areas along the bluff where appropriate and effective. However, park dedication is only required when property is platted, and thus, may only be applicable to the Kelley Farm site.

In addition, the two watershed management districts with jurisdiction in portions of the South Loop District administer regulations regarding grading and storm water drainage (quantity and quality). Both organizations have updated their respective management plans within the last six years. It is noted that the Lower Minnesota River Watershed District (LMRWD) identified some bluff-adjacent areas as “high value resource areas”, which are subject to more stringent development standards. The City’s stormwater management regulations meet or exceed those of the LMRWD and/or the state.

### **3.3 Implementation Information**

#### Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- Lower Minnesota River Watershed District.
- Richfield-Bloomington Watershed Management Organization.
- MPCA

#### Regulatory Programs

- Bloomington 2018 *Surface Water Management Plan*
- Lower Minnesota River *Watershed District Plan 2018-2027*
- Richfield-Bloomington *Watershed Management Plan 2018-2028*
- National Pollutant Discharge Elimination System (NPDES) Program, administered by the MPCA.

### Timeframe for Implementation of Mitigation

- Erosion and sedimentation mitigation required to support development-related impacts will be implemented as required in conjunction with grading permit review and construction for individual development projects.

### Financially Responsible Party/Parties

- Private Developers

## **4.0 FISH, WILDLIFE & ECOLOGICALLY SENSITIVE RESOURCES**

### **4.1 Summary of Impacts**

All proposed future development will be located in the relatively flat upland area that lies above the river bluff (760-foot elevation). Over 60 percent of the AUAR study area will remain as open space/conservation uses, which includes a portion of the Minnesota Valley National Wildlife Refuge (MVNWR).

The majority of the upland, developable area is currently or was formerly developed with urban/suburban uses, including housing, retail, office, and industrial development. The AUAR redevelopment scenario identifies eleven sites expected to redevelop by 2040. Only one - the Kelley Farm property - has not been previously developed for urban/suburban uses. However, it has been actively farmed for many decades and much of its natural condition and pre-settlement cultural resources have been altered.

The AUAR study area overlaps with Red Oak-White Oak- (Sugar Maple) Forest communities, which are identified as ecologically significant areas with a Minnesota Biological Survey (MBS) Site of Biodiversity Significance ranked Moderate. Several rare wetland native plant communities were also identified. Most of the upland area, where existing and future development will be located, has been developed and its natural community altered. The wetland areas are located within the MVNWR and/or zoned and guided for Conservation land uses. This area is not proposed for development and several existing regulatory protections are in place to minimize impacts from development on adjacent or nearby properties.

The DNR also identified state-listed and federally protected species that may be or are likely present in the study area vicinity. These include:

- Rusty Patched Bumble Bee (*Bombus affinis*)
- Northern Long-eared Bat (*Myotis septentrionalis*)
- Little Brown Bat (*Myotis lucifugus*)
- Big Brown Bat (*Eptesicus fuscus*)

It is noted that the NHIS is not an exhaustive inventory and does not represent all of the occurrences of rare features within the state, and further review may be necessary. Results of the Natural Heritage Review are valid for one year and such review does not constitute project approval by the DNR.

The primary potential development impact on ecologically sensitive resources relates to an unnamed stream located south and east of East Old Shakopee Road and 24<sup>th</sup> Ave, known by some locally as “Ike’s Creek”. The USFWS and the Minnesota Department of Natural Resources (DNR) stocked the stream with heritage-strain brook trout in 2007. The DNR has been evaluating the fish routinely and have found that the stream is supporting a healthy population of brook trout that have been reproducing naturally. The primary source aquifer for “Ike’s Creek” is assumed to be the shallow water table. Proposals to appropriate water from shallow wells in the vicinity of the stream have the potential to affect stream flow. Water appropriation may be proposed for dewatering to facilitate new construction. In addition, there are two existing industries in the South Loop District that currently have water appropriation permits to operate their production facilities (Polar Semiconductor and SkyWater Technology). Expansion of groundwater appropriation for these industries could have impacts on groundwater levels, surface water levels or the trout stream.

## **4.2 Mitigation Measures**

### *Rare Features and Species*

It is noted that this AUAR does not analyze the impacts of a specific development project, but the potential cumulative impacts of anticipated future development in the study area. As such, impacts of specific development projects will require further analysis at the time actual development plans are proposed to confirm compliance with federal law.

Recommended actions to minimize disturbance of the Red Oak-White Oak-(Sugar Maple) forest communities:

- Use stringent sediment and pollution containment measures.
- Inspect and clean all equipment prior to bringing it to the site to prevent the introduction and spread of invasive species
- Revegetate disturbed soil with native species suitable to the local habitat as soon after construction as possible.
- Continue to use natural wood-fiber and jute netting for erosion control.
- Continue to incorporate BWSR-approved, weed-free native plantings and seed mixes into stormwater features.
- Continue to encourage private developers to incorporate native plantings in their projects.

Recommended actions to minimize impacts on state-listed and/or federally protected species include:

- Avoid or limit tree and shrub removal during the months of June and July during pup-rearing season.

- Continue to report any observed Peregrine Falcons nesting in the study area to the DNR.
- Continue to implement and enforce City lighting standards, which are generally consistent with MnDOT Approved Products for luminaries.
- Consider implementing a “lights out” program to reduce non-essential building and structure lighting during bird migration (midnight to dawn March 15 through May 31), particularly for properties abutting the bluff.

### Unnamed Stream

To date, “Ike’s Creek” has not been added to the DNR’s designated trout stream list, which might impose additional development restrictions on sites abutting the creek. However, new development throughout the study area is required to meet various regulations regarding stormwater management, erosion control, and grading. The Lower Minnesota River Watershed District (LMRWD) designated the area encompassing this stream as a “high value resource area”, subject to more stringent development standards. It is noted the City’s stormwater regulations meet or exceed those standards. The City requires on-site retention of 1.1” of water for new development and fully re-constructed sites. This also exceeds the 1-inch abstraction requirement for new impervious surfaces as part of the NPDES Construction Permit. The DNR is encouraging increased infiltration practices when sites are being developed to provide extra groundwater recharge.

Some uses and development may request a water use permit. DNR review and permit approval is required for all users withdrawing more than 10,000 gallons of water per day or 1 million gallons per year. The DNR’s Water Appropriation Permit program exists to balance competing management objectives that include both development and protection of Minnesota’s water resources. If a water appropriation request is determined to have the potential to reduce the stream level by 10% or more, additional provisions may be imposed by the DNR in order to protect the stream level. Such provisions may include: reducing pumping rate, reduced pumping time, and winter withdrawal.

Four of the sites forecast for new or redevelopment in the AUAR development scenario are located adjacent to the Minnesota River bluff, although one has recently been redeveloped. Portions of these sites are located within the City’s Bluff Protection Overlay district and are subject to additional development standards to minimize physical and visual impacts on the bluff environment as described above in Section 3. Areas below the bluff are subject to development regulations in the Flood Hazard Overlay district which generally prohibits uses requiring structures, fill or storage of materials or equipment. In addition, the City’s stormwater management and grading regulations protect against erosion and water quality degradation.

## **4.3 Implementation Information**

### Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington

- MPCA
- Minnesota Department of Natural Resources

### Regulatory Programs

- City of Bloomington development review and approval
- City of Bloomington Bluff Protection Overlay zoning district regulations
- City of Bloomington Flood Hazard Overlay zoning district regulations
- Bloomington Comprehensive Surface Water Management Plan
- DNR Water Appropriation Permit program
- MPCA NPDES Construction Permit

### Timeframe for Implementation of Mitigation

- Actual impacts and need for mitigation would be identified in conjunction with review of specific development proposal.
- Permit review time varies by reviewing agencies

### Financially Responsible Party/Parties

- Private Developers
- City of Bloomington (for City projects only)

## **5.0 CULTURAL RESOURCES**

### **5.1 Summary of Impacts**

Historic or Architectural Resources - The South Loop District contains one architectural property that has been determined eligible for the National Register of Historic Places by the Minnesota State Historic Preservation Office (SHPO), Spruce Shadows Farm (HE-BLC-071 and HE-BLC-079), 2901 Old Shakopee Road, located near the bluff overlooking the Minnesota River in the SW-SE ¼ of Section 1, T27N, R24W. Spruce Shadows Farm includes a 2 ½ story stone residence constructed in 1933 and a complex of farm outbuildings that may be architecturally significant.

The Kelley Farm (aka Spruce Shadows Farm) is one of the sites identified for future development in the AUAR redevelopment scenario. The property is listed for sale and a future owner will likely pursue development of the site that would involve demolition of the farmstead house and outbuildings. Development is also proposed for the surrounding acreage, which may contain archaeological resources as described below.

Archaeological Resources - SHPO records contain documentation of seven recorded archaeological sites in the South Loop District. Five of the recorded sites document American Indian earthworks, four of which (21HE7, 21HE8, 21HE10 and 21HE11) were reported destroyed by subsequent land disturbances in the 1970s. The remaining earthworks site (21HE9) is reported no longer apparent. The remaining two sites

(21HE158) and 21HE190) are historic-period isolated finds and of limited historical significance and do not appear eligible for the National Register of Historic Places.

Only one of these seven sites - the Van Ness Mounds (21HE8) - is located within the Kelley property, which is identified as a future development site under the AUAR. While archaeological resources on this site may have been destroyed by agricultural activity over the past 100 years, identification of below ground remains of the nearby Lincoln Mound group (21HE7) during development of the nearby Ceridian campus (also located on the bluff) suggests the possibility that remnants of the other reportedly destroyed earthworks may survive. Records of this mound group date from the late nineteenth century and indicate a collection of mounds ranging in height from one to five feet.

In addition to the seven-recorded archaeological sites discussed above, some relatively undisturbed portions of the South Loop District, particularly near the bluff edge, within intermediate terraces of the bluff, and in the floodplain at the base of the bluff, have high potential for containing previously unreported sites.

## **5.2 Mitigation Measures**

*Historic Properties* - As development approvals are considered for the property, the City of Bloomington will encourage the property owner/developer to explore opportunities to preserve and reuse significant architectural resources as part of their development. If preservation or reuse is not feasible, the City of Bloomington will determine appropriate mitigation (including resource documentation) in consultation with the State Historic Preservation Office and the property owner/developer. It is also likely that review under Section 106 of the National Historic Preservation Act would likely be required.

*Archaeological Resources* - In response to the 2017 AUAR update the SHPO sent a letter (dated January 25, 2017), recommending that prior to development or other construction in the area containing the seven-recorded archaeological sites discussed above and the undisturbed areas near and on the bluff, an archaeological profile and preliminary archaeological testing (e.g. field walks and shovel tests) be conducted to determine the probability of additional archaeological sites in the area. Any evidence indicating the presence of an archaeological site should be discussed with the SHPO and the Office of the State Archaeologist per the Minnesota Private Cemeteries Act (Minn. Statutes 307.08), the Minnesota Indian Affairs Council, Tribal Historic Preservation Offices, and appropriate Native American tribes.

It is noted that City staff contacted the SHPO in September 2021 regarding this AUAR update and was informed that the SHPO would review the AUAR update during the required agency review period and no additional, or advanced review would be necessary.

The City will ensure future property owners/developers are aware of the potential existence of archaeological resources and require that preliminary archaeological testing is conducted. Any evidence indicating the presence of an archaeological site will be discussed with the State Historic Preservation Office and the Office of the State

Archaeologist per the Minnesota Private Cemeteries Act (Minn. Statutes 307.08), the Minnesota Indian Affairs Council, Tribal Historic Preservation Offices, and appropriate Native American tribes.

### **5.3 Implementation Information**

#### Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- Minnesota State Historic Preservation Office (SHPO)
- Minnesota State Archaeologist
- Minnesota Indian Affairs Council
- Tribal Historic Preservation Offices
- Native American tribal representatives

#### Regulatory Programs

- City of Bloomington development and permit review process
- State of Minnesota and tribal cultural resources review processes

#### Timeframe for Implementation of Mitigation

- As required by reviewing agencies (SHPO, State Archaeologist, Minnesota Indian Affairs Council, Tribal Historic Preservation Offices, Native American tribal representatives).

#### Financially Responsible Party/Parties

- Private developer

## **6.0 AIRSPACE RESTRICTIONS AND AIRPORT NOISE**

The proximity of the South Loop District to the Minneapolis-St. Paul International Airport (MSP) and the alignment of the Runway 17/35 result in some areas of the District being affected by aircraft noise and land use and airspace restrictions. Federal and state aviation regulations restrict intensity and type of land uses and the height of structures within defined areas in the vicinity of airport runways. Current regulations are described in the *Minneapolis-St. Paul International Airport (MSP) 2030 Long Term Comprehensive Plan Update (July 26, 2010)* and the Metropolitan Council's *2040 Transportation Policy Plan*. It is noted that the MAC is currently working on the MSP Airport 2040 Long Term Plan, which is anticipated to be completed in late 2022. In addition, the Joint Airport Zoning Board (JAZB) updated the MSP Zoning Ordinance, which was approved by the Minnesota Department of Transportation in 2004. Also in 2004, the City of Bloomington



adopted Airport Runway Overlay Districts to provide consistency with the 2004 MSP Zoning Ordinance and ensure appropriate regulation of noise sensitive land uses.

## 6.1 Summary of Impacts

Structure Height – The safety zone for Runway 17/35 at MSP covers the central portion of the South Loop District and is divided into two portions. Structures are only allowed in Safety Zone B, generally located south of American Boulevard. Over half of the sites identified for future redevelopment in the AUAR are located in Safety Zone B and subject to height restrictions.

Aircraft Noise – Since 2002, the area of the South Loop District located within high noise contours (65-70 decibel DNL and 70-75 decibel DNL) has been greatly reduced. In 2002, much of the central portion of the South Loop District was within the 70 and 75 DNL contours. By 2015, none of the South Loop district was within the 75 DNL contour and only a very small portion – located in the Runway Protection Zone where development is prohibited - was in the 70 DNL contour. At that time, most the Study Area was in the 60 and 65 DNL contours.

In the South Loop, no residential development is allowed or proposed in areas subject to noise levels in the current 65-70 DNL contour. However, several hotels exist and/or are proposed in this area. The City has code requirements related to noise mitigation (Section 10.29.04) and have attached conditions to project approval, on a case-specific basis and/or require noise studies. Many private developers of new hotels and residential projects in recent years have all conducted noise studies and designed their buildings to mitigate noise.

In areas experiencing noise levels in the 65-70 DNL range, residential, transient lodging uses, hospitals, nursing homes, churches, auditoriums and concert halls are considered incompatible, unless the community determines they may be allowed and outside-to-inside noise level reductions of at least 30 decibels are achieved. Most other uses, including office and retail uses, are considered compatible within this noise-level zone.

The most recent (2020) noise modeling indicates the area covered by the higher noise contours continues to shrink. As shown in Figure 19.1, most of the central area of the South Loop District lies between the 60 and 63 DNL contours. The other areas of the South Loop where future residential development is projected are located east of 30<sup>th</sup> Avenue and generally lie outside of the 60 DNL contour. However, it is important to note that noise modeling can fluctuate greatly for year to year. The lower noise levels recorded in 2020 may be due to unique factors, such as reduced air travel during the pandemic, which took hold in March 2020, but may not endure.

Under Part 150 Noise/Land Use Compatibility Guidelines, no land uses have been determined to be incompatible in the area between the 60 and 63 DNL contours. However, the Metropolitan Council's 2040 Transportation Policy Plan (TPP) defines areas with noise levels in the 60-64 DNL range as Noise Policy Area 4. In these areas noise exposure might be considered moderate. This area is also considered transitional since

potential changes in airport and aircraft operating procedures could lower or raise noise levels. The 2040 TPP mentions that development in this area can benefit from insulation levels above typical new construction standards.

Given noise reductions associated with newer aircraft and vehicles, and reduced peak traffic levels associated with the revised development scenario, an overall decrease in noise impacts is anticipated compared to the 2002 AUAR assessment. As such, the 2002 AUAR assessment reflects a “worst case” scenario relative to noise pollution.

## **6.2 Mitigation Measures**

In 2004, the City adopted its *Airport Runway Overlay Zoning Districts (AR-17 and AR-22)* to implement the 2004 Minneapolis-St Paul International Airport Zoning Ordinance, pursuant to the provisions and authority of Minnesota Statutes Sec. 360.063. These regulations prevent the establishment of Airport Hazards, including noise sensitive uses and establish limits for structure height.

*Height Limits* – The 2004 MSP zoning ordinance defines height limits generally and in relation to encroachment into the defined runway airspace. Height limits are graduated from north to south within Safety Zone B. Structures may exceed these limits, provided the City grants an Airport Zoning Permit. Structures may only pierce the airspace “ceiling” if granted permission by the MSP Airport Zoning Board of Adjustments and the Federal Aviation Administration (FAA) through the 7460 Airspace Review process. Variances are commonly requested to allow temporary structures, such as construction cranes, to exceed height limits.

*Noise Mitigation* – The City’s zoning regulations restrict certain uses within the airport safety zones, which are located in the 60—65 and 65-70 DNL contours. However use restrictions due to noise levels only apply to residential uses in areas subject to noise levels above the 70 DNL contour. Current (2020) noise contours do not show any areas in the South Loop within the 65-70 DNL contour. In addition, no residential development is allowed or proposed in areas subject to noise levels in the current 65-70 DNL contour.

The City has code requirements related to noise mitigation (Section 10.29.04) and may attach conditions to project approval, on a case-specific basis and/or require noise studies. It is also noted that private developers of new hotels and residential developed in recent years have all conducted noise studies and designed their buildings to mitigate noise. Multi-family residential developments in the South Loop located in the 60-65 DNL range have been required – via City Council approved conditions - to meet noise mitigation standards. The Minnesota Pollution Control Agency (MPCA) also enforces noise mitigation requirements in Minnesota Rules Chapter 7030.

## **6.3 Implementation Information**

### Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- Metropolitan Airports Commission
- Joint MSP Airport Zoning Board
- Federal Aviation Administration
- Minnesota Department of Transportation

#### Regulatory Programs

- City of Bloomington *Airport Runway Overlay Zoning Districts (AR-17 and AR-22)* – development review process;
- Joint MSP Airport Zoning Board *2004 Minneapolis-St Paul International Airport Zoning Ordinance* (pursuant to Minnesota Statutes Sec. 360.063) - Height variance reviews, airspace permit reviews;
- Metropolitan Airports Commission (MAC) – *Minneapolis-St. Paul International Airport (MSP) 2030 Long Term Comprehensive Plan Update (July 26, 2010)* and the Metropolitan Council’s *2040 Transportation Policy Plan*.
- Federal Aviation Administration Part 150 regulations (14 CFR Part 150)

#### Timeframe for Implementation of Mitigation

- Implemented in conjunction with review of development proposals on individual parcels

#### Financially Responsible Party/Parties

- No financial obligations to implement regulatory programs.
- Private developers responsible for installation of noise attenuation features in buildings.

## **7.0 CLIMATE RESILIENCY**

Since the last update to the South Loop AUAR, concerns have grown around climate change and the need to take action now to mitigate potential impacts in order to reduce the magnitude of anticipated impacts. Addressing development impacts on the climate is considered critical. The EQB is considering modifications to the environmental review documentation requirements to include two new sections dealing with climate change – Section 7: Climate Adaptation and Resilience and Section 18: Greenhouse Gas (GHG) Emissions and Carbon Footprint. These two new sections are currently being piloted as part of a revision to the EAW review form and are not officially required at this time. It is also noted that the draft EAW form does not provide guidance regarding how to address these items in an AUAR, which often analyzes the impacts of future (forecast) development as opposed to a specific, detailed development proposal.

However, in this AUAR update, the City of Bloomington made the decision to attempt to address the information requested in the pilot regarding climate change.

## **7.1 Summary of Impacts**

Studies and trends reported by the Minnesota Department of Natural Resources (DNR) indicate the state is getting warmer and wetter. Nine of the 10 warmest years occurred in the last few decades. During that same period, annual precipitation increased by an average of 3.4 inches.

These shifting climate patterns may result in increased flooding, extreme heat events, prolonged periods of drought, habitat loss, and spread of invasive species, pests, and pathogens, and other impacts. Moving forward, our approach to development (buildings, infrastructure, land use regulations, etc.) will need to accommodate or work to reduce the negative effects of these potential climate change outcomes.

Addressing climate change at the local city level primarily involves regulatory policies to reduce the impacts of development. Some of these regulations have been in place in Bloomington, and many cities for a long time (e.g., stormwater management, tree preservation, landscape requirements). Others involve creation of new regulations and practices aimed at addressing energy use, greenhouse gas emission, and resiliency.

The AUAR study area (South Loop District) has been developed with a mix of commercial, industrial, and residential land uses since the 1960s. It has long been planned to accommodate an intensive mix of land uses, given its proximity to the MSP Airport and convenient access to the regional highway system (I-494, TH 77). As a result of its existing level of development, the South Loop is one of the areas in the City most vulnerable to extreme heat, flooding, and air pollution from traffic.

## **7.2 Mitigation Measures**

### Flooding and Drought

The City of Bloomington has had regulations in place for many years to address flooding (stormwater management) and to some extent heat islands (landscape requirements).

*Increased Precipitation:* All development must comply with our Comprehensive Stormwater Management Plan (CSWMP) requirements, which were recently updated to align with Atlas 14 data, which was compiled from newer rainfall data from the last 30 years. To address increasing flood vulnerability, the City is currently working with our local watershed districts and other agencies to assess vulnerabilities from potential future “mid-century (e.g., 2050)” rainfall events. The City will continue to work with our partners to identify strategies to address changes to rainfall frequency and intensity.

Drought: The City has a DNR mandated and approved Water Supply Plan that implements long term water sustainability, conservation, and critical emergency preparedness measures. The City has also adopted a Critical Water Deficiency ordinance that defines procedures to restrict water usage under certain emergency declarations. To further encourage reductions in water usage, the City has adopted the State Plumbing Code that regulates the use of low-flow plumbing fixtures for permitted construction. The City's water conservation activities are reviewed and documented annually during DNR Water Conservation Reporting.

### Green House Gas Emissions

In recent years, Bloomington has begun to analyze climate-related impacts and identify potential strategies to mitigate those impacts. The primary focus to date has been on strategies to address energy use and to reduce GHG emissions from buildings and vehicles.

Energy: The electricity and natural gas used to fuel buildings are the largest source of greenhouse gas emissions in Bloomington. In 2018 the City of Bloomington adopted an Energy Action Plan that outlines community energy goals to achieve by 2035 including:

- Reduce citywide energy-related greenhouse gas (GHG) emissions 75%;
- Reduce citywide electricity-related GHG emissions by 95%; and
- Reduce citywide natural gas related GHG emissions by 33%

Improving existing buildings through energy efficiency upgrades and designing new buildings to be efficient are the most cost-effective ways to achieve these goals. Using renewable energy sources and electrification are also important strategies.

City actions to reduce energy-related greenhouse gas emissions include:

- Requiring commercial, public, and multifamily buildings over 75,000 sq ft to annually benchmark and disclose high-level energy metrics (ordinance adopted September 2021).
- Adopting energy disclosure requirements in our Time-of-Sale housing evaluation disclosure reports (ordinance adopted September 2021).
- Adopting and enforcing various development standards and regulations related to solar power (in progress).

Transportation: Some approaches the City can or is taking to reduce greenhouse gas emissions from passenger vehicles include:

- Working with partner agencies to improve transportation options like biking, telework, ride share services, transit, and walking.
- Using electric vehicles instead of gasoline-fuel vehicles in our City fleet of vehicles.
- Adopted requirements to include electric vehicle charging infrastructure in new developments.

Actions used to reduce transportation-related greenhouse gas emissions in Bloomington include:

- Adopting zoning that promotes and fosters compact, mixed-use development
- Adopting plans to promote and foster alternative transportation options, including the Alternative Transportation Plan (2016), Park System Master Plan (2021).

As noted above, the South Loop District is planned to be a dense, mixed-use district. This area is very well served by a range of transit, including light-rail and bus rapid transit. The *South Loop District Plan (2012)* recommends expanding the pedestrian/bicycle network to facilitate and encourage non-vehicular trips within the district. This plan is expected to be updated in 2023-24, during which priority pedestrian/bicycle facility projects can be identified. It is also noted the City has several policies and plans aimed at fostering low-carbon transportation and mobility.

### Approaches to Climate Resiliency

The City is engaged in multiple efforts to address sustainability and resilience. The City joined the Minnesota Green Step Cities initiative in August 2017 and achieved steps 4 and 5 in May 2021. The City's Green Step City efforts identify a range of actions the City will take to achieve our sustainability goals.

City efforts to enhance climate resiliency are embodied in a variety of plans and studies that include strategies to foster alternative transportation, compact and low-impact development design, address urban heat islands, invasive species management, and extreme rain events. Examples include:

- The City has several policies and plans aimed at fostering alternative transportation and mobility.
- Zoning Code updates that promote and foster compact, mixed-use development. Landscape standards require a minimum number of overstory trees and other vegetation as well as parking lot landscaping, both perimeter and internal islands, must be planted with deciduous trees to provide shade.
- Adoption of the Park System Master Plan (2021) that highlights "resiliency" as a guiding principle.
- Conducting an inventory of natural resources and identification of strategies to protect and enhance these priority resources.
- Adoption and enforcement of various development standards and regulations related to stormwater management, bluff protection, shoreland protection, native landscaping, and solar infrastructure.

While the City recognizes and is beginning to track air pollution, there are no resiliency efforts in place aimed specifically at air pollution. The City is considering establishing sustainable development standards, which could include use of low-impact design BMPs and landscape guidance to enhance micro-climate benefits, such as planting

deciduous trees on south/west sides of buildings to provide summer shade and allow winter radiant heat.

This is not an exhaustive list but illustrates that the City is actively working to develop and implement policies and programs to enhance our climate resilience. The City also has a Sustainability Commission and staff focused on coordinating sustainability efforts across the organization.

### **7.3 Implementation Information**

#### Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- Metro Transit
- Metropolitan Council
- Hennepin County
- Minnesota Department of Transportation
- Three Rivers Parks District

#### Regulatory and Policy Programs

- City of Bloomington development review and approval
- City of Bloomington zoning and development regulations
- Bloomington Alternative Transportation Plan
- Bloomington Park System Master Plan
- Bloomington Energy Action Plan
- Bloomington 10-Year Capital Improvement Plan

#### Timeframe for Implementation of Mitigation

- Actual impacts and need for mitigation would be identified in conjunction with review of specific development proposal.
- Permit review time varies by reviewing agencies.
- Opportunities for implementation may arise through receipt of grants

#### Financially Responsible Party/Parties

- Private Developers
- City of Bloomington (for City projects only)
- Partners agencies (e.g., MDOT, Hennepin County, Three Rivers Park District, Metro Transit)

## 8.0 BLOOMINGTON DEVELOPMENT REVIEW PROCESS

The City of Bloomington has an established process for reviewing development proposals. Having a clear and consistent review process ensures:

- Compliance with Minnesota Statutes for notice and hearing requirements;
- Provision of a reasonable level of public review and input;
- Thorough evaluation of design elements that affect the public;
- Efficient use of time by the applicant, City staff, and the public; and
- Facilitation of a clear and objective review.

The process involves multiple steps; though certain types of applications are eligible for expedited review. Most development applications adhere to the review process described below.

1. **Informal Discussion with Staff** – potential applicants discuss their development proposals with planning and other staff to identify the necessary review/approval process, deficiencies relative to City Code requirements, consistency with City development policies, and plans and documents that must be submitted with a formal application.
2. **Informal Development Review Committee (DRC) Review** – the applicant prepares necessary plans and documents to explain the nature of the use or development for review by the DRC prior to submission of a formal development application. The DRC (composed of staff from City departments involved in development, infrastructure, and public safety) reviews the plans to identify modifications or issues to address prior to submitting plans for formal review.
3. **Formal DRC Review** – after a formal development application has been submitted and deemed complete, the DRC reviews the proposal for compliance with City’s plans, policies, and ordinances.
4. **Planning Commission Review** – the Planning Commission holds public hearings and makes recommendations on land use and development issues that are forwarded to the City Council.
5. **City Council Review and Approval** – the City Council exercises the legislative power of the City of Bloomington and establishes City policy. The City Council is the final authority on development applications and may apply specific conditions to an approval to mitigate potential negative impacts. Execution of development agreements, stipulating the roles and responsibilities of the developer and City is also required for many projects.

Once a development proposal is approved by the City Council, the applicant/developer prepares detailed plans and applies for required permits. Most development proposals require permits issued by the City and other agencies. The most common permit types reviewed and issued by the City include:



- Building demolition
- Grading and erosion control
- Building, electrical, and plumbing permits
- Access (driveway) permits onto local (city) streets. Permits for access onto County or State roads are provided by the agency with road jurisdiction.

The City also has review and issuing authority for the following types of permits that apply to some, but not all development proposal:

- Airport Zoning Permit – these permits are administered by the City and are required when structures exceed defined height levels in the MSP Airport Zoning Ordinance.
- Well sealing – private water supply wells existing on property proposed for redevelopment must be sealing in accordance with Minnesota Department of Health regulations. The City administers this process.

Some development proposals trigger the need for review and/or permits from other agencies. Some examples include:

- Water Appropriation – the DNR reviews and issues permits for water users withdrawing more than 10,000 gallons per day or 1 million gallons per year.
- Airspace Height Variance – structures are not allowed to pierce the Airspace Zone height limits unless granted permission by the MSP Airport Zoning Board of Adjustments and Federal Aviation Administration (FAA). It is fairly common for height variances to be granted for construction equipment that will temporarily exceed the maximum construction height limits.
- Noise Attenuation– Current City Council practice has been to require noise attenuation via conditions of approval for some development proposals, particularly multifamily residential, located in noise sensitive areas of the South Loop District. In addition, noise attenuation measures are reviewed by the Minnesota Pollution Control Agency (MPCA) who manages noise mitigation requirements in Section 7030 of State Statutes.

Table 9.1 in the AUAR provides a more comprehensive description of the range of permits that may apply to a development proposal in the South Loop District. In addition, the table in subsection 2.3 above summarizes common permits and responsible implementing parties related to infrastructure improvements proposed to accommodate forecast development in the South Loop District.

## **9.0 FUTURE ENVIRONMENTAL CONCERNS OR IMPACTS NOT ANTICIPATED IN THIS AUAR AND MITIGATION PLAN**

This Mitigation Plan identifies potential impacts and proposed mitigation related to the updated AUAR development scenario, which describes future “full build” development anticipated to occur in the South Loop District through 2040 or 2045. Given the AUAR development scenario spans over 20 years, as actual development plans are prepared and/or regulatory requirements change, environmental concerns or issues may be identified that differ from those addressed in the AUAR and this Mitigation Plan. Also, new information or mitigation methods may be developed after the approval of this Plan.

To remain in effect, the AUAR and this Mitigation Plan must be routinely updated at least every five years. More frequent updates will occur if development activity occurs that triggers an update in accordance with Minnesota Rules 4410.3610, Subpart 7. Updates to this Mitigation Plan will be conducted as necessary to identify measures to avoid, minimize and mitigate for any additional or new impacts identified through future AUAR updates.

## **10. ACTIONS BEYOND THE SCOPE OF THIS AUAR AND MITIGATION PLAN**

The City is responsible for permits/approvals and related mitigation for regulatory issues and impacts under its local jurisdiction (e.g., traffic improvements). Private developers are responsible for obtaining all permits necessary from all governmental agencies having jurisdiction over their development.