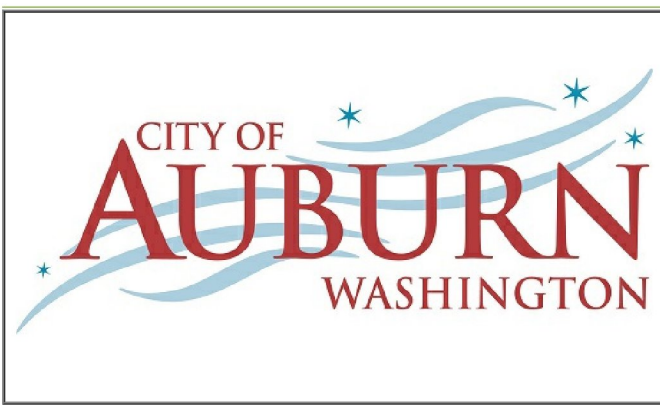


	City Council Study Session Community Wellness Special Focus Area August 12, 2019 - 5:30 PM City Hall Council Chambers AGENDA Watch the meeting LIVE! Watch the meeting video Meeting videos are not available until 72 hours after the meeting has concluded.
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I. CALL TO ORDER

- A. Roll Call

II. ANNOUNCEMENTS REPORTS AND PRESENTATIONS

- A. Introduction of Director of Finance Jamie Thomas

III. AGENDA ITEMS FOR COUNCIL DISCUSSION

- A. Ordinance No. 6726 (Gaub) (5 Minutes)

An Ordinance of the City Council of the City of Auburn, Washington, relating to the Limited Public Works Process and amending Section 3.12.100 of the Auburn City Code

- B. Resolution No. 5450 (Thomas) (10 Minutes)

A Resolution of the City Council of the City of Auburn, Washington, authorizing the contribution and withdrawal of City monies in the State of Washington Local Government Investment Pool

- C. 2019 Justice Assistance Grant (JAG Grant) (Pierson) (5 Minutes)

IV. COMMUNITY WELLNESS DISCUSSION ITEMS

- A. Annual Housing Repair Program Report (Tate) (20 Minutes)

Annual overview of housing repair projects funded through HUD's Community Development Block Grant (CDBG) program

- B. Multi-Family Property Inspections (Tate) (15 Minutes)

How multi-family property inspections might look in Auburn, and how they would work with current programs such as S.A.F.E.R. (Safe Auburn For Every Resident)

- C. Human Services Agency Accomplishments and Site Visit Reports (Tate) (15 Minutes)

A mid-year update on agencies receiving Human Services Funding and year-to-date accomplishments

V. OTHER DISCUSSION ITEMS

VI. NEW BUSINESS

VII. MATRIX

A. Matrix

VIII. ADJOURNMENT

Agendas and minutes are available to the public at the City Clerk's Office, on the City website (<http://www.auburnwa.gov>), and via e-mail. Complete agenda packets are available for review at the City Clerk's Office.



AGENDA BILL APPROVAL FORM

Agenda Subject:

Ordinance No. 6726 (Gaub) (5 Minutes)

Date:

August 1, 2019

Department:

Public Works

Attachments:

[Ordinance No. 6726](#)

[Exhibit A](#)

Budget Impact:

Current Budget: \$0

Proposed Revision: \$0

Revised Budget: \$0

Administrative Recommendation:

For discussion only.

Background Summary:

Ordinance 6726 provides for a revision to Auburn City Code Chapter 3.12, Public Contracts. The ordinance includes a modification to contract authorities and processes for the Limited Public Works Process to be consistent with current RCWs.

Staff recommends that City Code 3.12.100 be amended to match the bid limit authorities to be in line with State competitive bid limits.

Reviewed by Council Committees:**Councilmember:****Staff:**

Gaub

Meeting Date: August 12, 2019

Item Number:

ORDINANCE NO. 6726

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
AUBURN, WASHINGTON, RELATING TO THE LIMITED
PUBLIC WORKS PROCESS AND AMENDING SECTION
3.12.100 OF THE AUBURN CITY CODE

WHEREAS, the Chapter 3.12 of the Auburn City Code sets forth the City's
procedures and requirements related to public contracting; and

WHEREAS, the Washington State Legislature amended the small works roster
contract procedures for limited public works processes during the 2019 legislative session
and it is necessary to amend the City Code consistent with the statutory revisions; and

WHEREAS, the City finds it is advantageous to make the limited public works
process as flexible as would be permitted under state law and to accommodate
contracting needs that fall below the level of required competitive bidding; and

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN,
WASHINGTON, DO ORDAIN as follows:

Section 1. Amending City Code Section. Section 3.12.100 to the Auburn City
Code is amended to read as shown in Exhibit A.

Section 2. Implementation. The Mayor is authorized to implement those
administrative procedures necessary to carry out the directives of this legislation.

Section 3. Severability. The provisions of this ordinance are declared to be
separate and severable. The invalidity of any clause, sentence, paragraph, subdivision,
section, or portion of this ordinance, or the invalidity of the application of it to any person
or circumstance, will not affect the validity of the remainder of this ordinance, or the validity
of its application to other persons or circumstances.

Section 4. **Effective date.** This Ordinance will take effect and be in force five days from and after its passage, approval, and publication as provided by law.

INTRODUCED: _____

PASSED: _____

APPROVED: _____

NANCY BACKUS, MAYOR

ATTEST:

Shawn Campbell, MMC, City Clerk

APPROVED AS TO FORM:

Steven L. Gross, City Attorney

Published: _____

EXHIBIT A

3.12.100 Limited Public Works Process

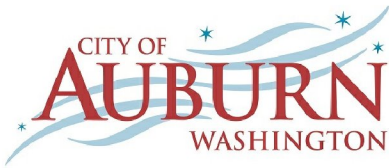
If the estimated cost of a work, construction, alteration, repair, or improvement project ~~is estimated to cost less than \$35,000, or~~ does not exceed the current statutory limit in RCW 39.04.155(3), the city may award such a contract using the limited public works process ~~provided under RCW 39.04.155(3).~~

Public works projects awarded under the limited public works process are exempt from the other requirements of the small works process provided under ACC 3.12.090.

For limited public works projects, the city shall solicit electronic or written quotations from a minimum of three contractors from the appropriate small works roster and shall award the contract to the lowest responsible bidder, as defined under RCW 39.04.010 and 39.04.350, and ACC 3.12.0150. After an award is made, the quotations shall be open to public inspection and available by electronic request.

For limited public works projects, the city may waive the payment and performance bond requirements of Chapter 39.08 RCW and the retainage requirements of Chapter 60.28 RCW, thereby assuming the liability for the contractor's nonpayment of laborers, mechanics, subcontractors, materialmen, suppliers, ~~and taxes,~~ increases, and penalties imposed under ~~RCW Titles 50, 51, and 82~~ RCW that may be due from the contractor for the limited public works project. However, the city shall have the right of recovery against the contractor for any payments made on the contractor's behalf.

The city shall maintain a list of the contractors contacted and the contracts awarded during the previous 24 months under the limited public works process, including the name of the contractor, the contractor's registration number, the amount of the contract, a brief description of the type of work performed, and the date the contract was awarded. (Ord. 6545 § 1, 2014; Ord. 5866 § 1, 2004. Formerly 3.12.036.)



AGENDA BILL APPROVAL FORM

Agenda Subject:

Resolution No. 5450 (Thomas) (10 Minutes)

Date:

August 7, 2019

Department:

Finance

Attachments:

[Resolution 5450](#)

[Attachment A - LGIP Investment Form](#)

[Prospectus](#)

Budget Impact:**Administrative Recommendation:**

City Council to approve Resolution No. 5450

Background Summary:

Resolution No. 5046, which was approved on April 21, 2014, designated Finance Director Shelley Coleman as the City's "authorized individual" to authorize all amendments, changes, or alterations to the Washington State Local Government Investment Pool (LGIP) Authorization Form including the designation of other individuals to make contributions and withdrawals on behalf of the City of Auburn.

With her recent retirement, the City is required to provide the LGIP with a Resolution which designates the current "authorized individual." At the time Resolution No. 5046 was adopted, the LGIP required the "authorized individual" to be cited by name. The LGIP has since dropped that requirement and now permits authorization at the position title level. Accordingly, the attached Resolution designates the Finance Director as the City of Auburn "authorized individual."

Reviewed by Council Committees:**Councilmember:****Staff:**

Thomas

Meeting Date: August 12, 2019

Item Number:

RESOLUTION NO. 5450

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
AUBURN, WASHINGTON, AUTHORIZING THE
CONTRIBUTION AND WITHDRAWAL OF CITY MONIES IN
THE STATE OF WASHINGTON LOCAL GOVERNMENT
INVESTMENT POOL

WHEREAS, in 1986, the Legislature created the Local Government Investment Pool ("LGIP") for the contribution and withdrawal of money by an authorized governmental entity for purposes of investment by the Office of the State Treasurer; and

WHEREAS, the City has contributed funds available for investment in the LGIP;
and

WHEREAS, the City must authorize contributions and withdrawals by Resolution;
and

WHEREAS, designees appointed by the City to contribute and withdraw City funds have received and read a copy of the prospectus and understand the risks and limitations of investing in the LGIP.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN,
WASHINGTON, RESOLVES as follows:

Section 1. The City Council authorizes the contribution and withdrawal of City monies in the LGIP in the manner prescribed by law, rule, and prospectus.

Section 2. The City Council approves the Local Government Investment Pool Transaction Authorization Form (Form) as completed by the Finance Director.

Section 3. The City Council designates the Finance Director, as the "authorized individual" to authorize all amendments, changes, or alterations to the Form or any other

documentation, including the designation of other individuals to make contributions and withdrawals on behalf of the City of Auburn.

Section 4. This delegation ends on written notice, by any method set forth in the prospectus, of the governing body that the authorized individual has been terminated or that the individual's delegation has been revoked. The Office of the State Treasurer will rely solely on the City of Auburn to provide notice of such revocation and is entitled to rely on the authorized individual's instructions until such time as said notice has been provided.

Section 5. The Form will remain in effect after revocation of the authorized individual's delegated authority, except that the authorized individual whose delegation has been terminated shall not be permitted to make further withdrawals or contributions to the LGIP on behalf of the City of Auburn. No amendments, changes, or alterations shall be made to the Form or any other documentation until the City passes a new resolution naming a new authorized individual.

Section 6. The City Council acknowledges that it has received, read, and understood the prospectus as provided by the Office of the State Treasurer. In addition, the City Council agrees that a copy of the prospectus will be provided to any person delegated or otherwise authorized to make contributions or withdrawals into or out of the LGIP and that said individuals will be required to read the prospectus prior to making any withdrawals or contributions or any further withdrawals or contributions if authorizations are already in place.

Section 7. The Mayor or designee is authorized to submit the Form on behalf of the City of Auburn.

Section 8. The Mayor is authorized to implement those administrative procedures necessary to carry out the directives of this legislation.

Section 9. This Resolution will take effect and be in full force on passage and signatures.

Dated and Signed this _____ day of _____, 2019.

CITY OF AUBURN

NANCY BACKUS, MAYOR

ATTEST:

APPROVED AS TO FORM:

Shawn Campbell, MMC, City Clerk

Steven L. Gross, City Attorney

LOCAL GOVERNMENT INVESTMENT POOL AUTHORIZATION FORM

Please fill out this form completely, including any existing information, as this form will **replace** the previous form.

Entity Name:	City of Auburn
Mailing Address:	City of Auburn-Finance Dept. 25 West Main Street Auburn WA 98001-4998

Statement Delivery Options:

☒ EMAIL: jdavies@auburnwa.gov ☒ FAX: 253-876-1920 ☒ BOTH

Note: Statements can only be emailed to **ONE** address due to system restrictions

Bank account where funds will be wired when a withdrawal is requested.

(Note: Funds **will not** be transferred to any account other than listed)

Bank Name:	Key Bank
Branch Location:	Auburn, WA 98001
Bank Routing Number:	
Accounting Number:	
Account Name:	City of Auburn

ACH Authorization: ☒ Yes ☐ No
Account Type: ☒ Checking ☐ Savings ☐ General Ledger

By selecting "Yes" and by signing this form, I hereby authorize the WA Local Government Investment Pool to initiate credit entries to the account listed above. I acknowledge that the origination of ACH transactions to our account must comply with the provisions of U.S. law.

Persons authorized to make deposits and withdrawals for entity listed above.

Name:	Title:	Phone Number:	Signature:
Jamie Thomas	Finance Director	253-804-5019	
Kevin Fuhrer	Asst. Finance Director	253-804-5022	
Elveena Watson	Payroll Specialist	253-876-1955	
Greg Dysart	Payroll Specialist	253-804-5024	

Online TMS Access: ☒ Yes ☐ No

If you selected yes, please complete the online section on page 2

If you selected no, skip the online access section

TMS Online Web Access

Note: Only complete this section if anyone wishes to have online access. Each Full access LGIP person must also be listed on the Transaction Authorization Form. [Please do not fill out the greyed-out areas]

	Service Type:				Account Type:	
Name:	Add	Delete	Modify	No Change	Full	View Only
Email:	☐	☐	☐	☐	☐	☐
Name:	Add	Delete	Modify	No Change	Full	View Only
Email:	☐	☐	☐	☐	☐	☐
Name:	Add	Delete	Modify	No Change	Full	View Only
Email:	☐	☐	☐	☐	☐	☐
Name:	Add	Delete	Modify	No Change	Full	View Only
Email:	☐	☐	☐	☐	☐	☐
Name:	Add	Delete	Modify	No Change	Full	View Only
Email:	☐	☐	☐	☐	☐	☐
Name:	Add	Delete	Modify	No Change	Full	View Only
Email:	☐	☐	☐	☐	☐	☐
Name:	Add	Delete	Modify	No Change	Full	View Only
Email:	☐	☐	☐	☐	☐	☐

OST Staff	
UserID	App Date
UserID	App Date
UserID	App Date
UserID	App Date
UserID	App Date
UserID	App Date

By signing below, I certify I am authorized to represent the institution/agency for the purpose of this transaction.

<i>(Authorized Signature)</i>	<i>(Title)</i>	<i>(Date)</i>
<i>(Print Authorized Name)</i>	<i>(E-mail address)</i>	<i>(Phone no.)</i>

Any changes to these instructions must be submitted in writing to the Office of the State Treasurer.

OFFICE OF THE STATE TREASURER
STACLASHE@TRE.WA.GOV
 PHONE: (360) 902-9017
 FAX: (360) 902-9044

Date Received: ____ / ____ / ____

Account Number: _____

OK'd by: _____

(For OST use only)

04/26/19

State of Washington }
 County of _____ } ss.

Signed or attested before me by _____.

Dated this ____ day of _____, 20____.

Signature of Notary

SEAL OR STAMP _____

Typed or printed name of Notary
 Notary Public in and for the State of Wash.

My appointment expires: _____

LOCAL GOVERNMENT
INVESTMENT POOL

Prospectus

August 2016



James L. McIntire
Washington State Treasurer

Contents

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IV.	Miscellaneous	10

I. The LGIP

The Local Government Investment Pool (the “LGIP”) is an investment pool of public funds placed in the custody of the Office of the Washington State Treasurer (the “State Treasurer”) for investment and reinvestment as defined by RCW 43.250.020. The purpose of the LGIP is to allow eligible governmental entities to participate with the state in the investment of surplus public funds, in a manner that optimizes liquidity and return on such funds. In establishing the LGIP, the legislature recognized that not all eligible governmental entities are able to maximize the return on their temporary surplus funds, and therefore it provided a mechanism whereby they may, at their option, utilize the resources of the State Treasurer to maximize the potential of their surplus funds while ensuring the liquidity of those funds.

The State Treasurer has established a sub-pool within the LGIP whose shares are offered by means of this Prospectus: The LGIP-Money Market Fund (the “LGIP-MMF” or the “Fund”). The State Treasurer has the authority to establish additional sub-pools in the future.

The Fund offered in this Prospectus seeks to provide current income by investing in high-quality, short term money market instruments. These standards are specific to the Fund, as illustrated in the following table. The LGIP-MMF offers daily contributions and withdrawals.

FUND SNAPSHOT

The table below provides a summary comparison of the Fund’s investment types and sensitivity to interest rate risk. This current snapshot can be expected to vary over time.

Fund	Investment Types	Maximum Dollar-Weighted Average Maturity for LGIP-MMF
LGIP-Money Market Fund	Cash	60 days
Current Investments (as of July 1, 2016)	Bank Deposits US Treasury bills Repurchase agreements US Government agency obligations	

Fees and Expenses

Administrative Fee. The State Treasurer charges pool participants a fee representing administration and recovery costs associated with the operation of the Fund. The administrative fee accrues daily from pool participants’ earnings prior to the earnings being posted to their account. The administrative fee will be paid monthly. In the event that there are no earnings, the administrative fee will be deducted from principal.

The chart below illustrates the operating expenses of the LGIP-MMF for past years, expressed in basis points as a percentage of fund assets.

Local Government Investment Pool-MMF
Operating Expenses by Fiscal Year (in Basis Points)

			2009	2010	2011	2012	2013	2014	2015	2016
<i>Total Operating Expenses</i>			<i>0.88</i>	<i>0.64</i>	<i>0.81</i>	<i>0.68</i>	<i>0.87</i>	<i>0.88</i>	<i>0.95</i>	<i>0.88</i>

(1 basis point = 0.01%)

Because most of the expenses of the LGIP-MMF are fixed costs, the fee (expressed as a percentage of fund assets) will be affected by: (i) the amount of operating expenses; and (ii) the assets of the LGIP-MMF. The table below shows how the fee (expressed as a percentage of fund assets) would change as the fund assets change, assuming an annual fund operating expenses amount of \$950,000.

Fund Assets	\$8.0 bn	\$10.0 bn	\$12.0 bn
Total Operating Expenses (in Basis Points)	1.19	0.95	0.79

Portfolio Turnover: The Fund does not pay a commission or fee when it buys or sells securities (or “turns over” its portfolio). However, debt securities often trade with a bid/ask spread. Consequently, a higher portfolio turnover rate may generate higher transaction costs that could affect the Fund’s performance.

II. Local Government Investment Pool – Money Market Fund

Investment Objective

The LGIP-MMF will seek to effectively maximize yield while maintaining liquidity and a stable net asset value per share, e.g., all contributions will be transacted at \$1.00 net asset value per share.

Principal Investment Strategies

The LGIP-MMF will seek to invest primarily in high-quality, short term money market instruments. Typically, at least 55% of the Fund’s assets will be invested in US government securities and repurchase agreements collateralized by those securities. The LGIP-MMF means a sub-pool of the LGIP whose investments will primarily be money market instruments. The LGIP-MMF will only invest in eligible investments permitted by state law. The LGIP portfolio will be managed to meet the portfolio maturity, quality, diversification and liquidity requirements set forth in GASB 79 for external investment pools who wish to measure, for financial reporting purposes, all of their investments at amortized cost. Investments of the LGIP-MMF will conform to the LGIP Investment Policy, the most recent version of which will be posted on the LGIP website and will be available upon request.

Principal Risks of Investing in the LGIP-Money Market Fund

Counterparty Credit Risk. A party to a transaction involving the Fund may fail to meet its obligations. This could cause the Fund to lose the benefit of the transaction or prevent the Fund from selling or buying other securities to implement its investment strategies.

Interest Rate Risk. The LGIP-MMF’s income may decline when interest rates fall. Because the Fund’s income is based on short-term interest rates, which can fluctuate significantly over short periods, income risk is expected to

be high. In addition, interest rate increases can cause the price of a debt security to decrease and even lead to a loss of principal.

Liquidity Risk. Liquidity risk is the risk that the Fund will experience significant net withdrawals of Fund shares at a time when it cannot find willing buyers for its portfolio securities or can only sell its portfolio securities at a material loss.

Management Risk. Poor security selection or an ineffective investment strategy could cause the LGIP-MMF to underperform relevant benchmarks or other funds with a similar investment objective.

Issuer Risk. The LGIP-MMF is subject to the risk that debt issuers and other counterparties may not honor their obligations. Changes in an issuer's credit rating (e.g., a rating downgrade) or the market's perception of an issuer's creditworthiness could also affect the value of the Fund's investment in that issuer. The degree of credit risk depends on both the financial condition of the issuer and the terms of the obligation. Also, a decline in the credit quality of an issuer can cause the price of a money market security to decrease.

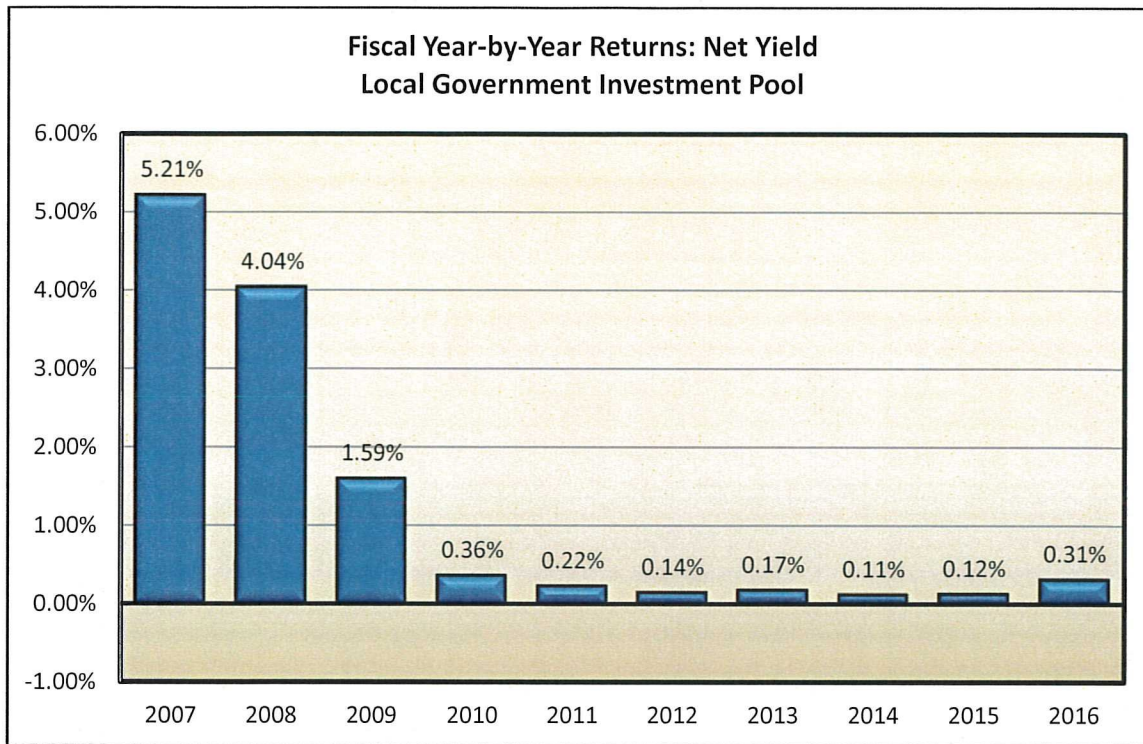
Securities Lending Risk and Reverse Repurchase Agreement Risk. The LGIP-MMF may engage in securities lending or in reverse repurchase agreements. Securities lending and reverse repurchase agreements involve the risk that the Fund may lose money because the borrower of the Fund's securities fails to return the securities in a timely manner or at all or the Fund's lending agent defaults on its obligations to indemnify the Fund, or such obligations prove unenforceable. The Fund could also lose money in the event of a decline in the value of the collateral provided for loaned securities or a decline in the value of any investments made with cash collateral.

Risks Associated with use of Amortized Cost. The use of amortized cost valuation means that the LGIP-MMF's share price may vary from its market value NAV per share. In the unlikely event that the State Treasurer were to determine that the extent of the deviation between the Fund's amortized cost per share and its market-based NAV per share may result in material dilution or other unfair results to shareholders, the State Treasurer may cause the Fund to take such action as it deems appropriate to eliminate or reduce to the extent practicable such dilution or unfair results.

An investment in the LGIP-MMF is not a bank deposit and is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of investments at \$1 per share, pool participants could lose money by investing in the LGIP-MMF. There is no assurance that the LGIP-MMF will achieve its investment objective.

Performance

The following information is intended to address the risks of investing in the LGIP-MMF. The information illustrates changes in the performance of the LGIP-MMF's shares from year to year. Returns are based on past results and are not an indication of future performance. Updated performance information may be obtained on our website at www.tre.wa.gov or by calling the LGIP toll-free at 800-331-3284.



<u>Local Government Investment Pool-Money Market Fund</u>			
<u>Average Accrued Net Yield</u>			
<u>1 Year</u>	<u>3 years</u>	<u>5 years</u>	<u>10 years</u>
0.31%	0.18%	0.17%	1.28%

Transactions: LGIP-MMF

General Information

The minimum transaction size (contributions or withdrawals) for the LGIP-MMF will be five thousand dollars. The State Treasurer may, in its sole discretion, allow for transactions of less than five thousand dollars.

Valuing Shares

The LGIP-MMF will be operated using a net asset value (NAV) calculation based on the amortized cost of all securities held such that the securities will be valued at their acquisition cost, plus accrued income, amortized daily.

The Fund's NAV will be the value of a single share. NAV will normally be calculated as of the close of business of the NYSE, usually 4:00 p.m. Eastern time. If the NYSE is closed on a particular day, the Fund will be priced on the next day the NYSE is open.

NAV will not be calculated and the Fund will not process contributions and withdrawals submitted on days when the Fund is not open for business. The time at which shares are priced and until which contributions and withdrawals are accepted is specified below and may be changed as permitted by the State Treasurer.

To the extent that the LGIP-MMF's assets are traded in other markets on days when the Fund is not open for business, the value of the Fund's assets may be affected on those days. In addition, trading in some of the Fund's assets may not occur on days when the Fund is open for business.

Transaction Limitations

The State Treasurer reserves the right at its sole discretion to set a minimum and/or maximum transaction amount from the LGIP-MMF and to limit the number of transactions, whether contribution, withdrawal, or transfer permitted in a day or any other given period of time.

The State Treasurer also reserves the right at its sole discretion to reject any proposed contribution, and in particular to reject any proposed contribution made by a pool participant engaged in behavior deemed by the State Treasurer to be abusive of the LGIP-MMF.

A pool participant may transfer funds from one LGIP-MMF account to another subject to the same time and contribution limits as set forth in WAC 210.10.060.

Contributions deposited by ACH will be unavailable for withdrawal for a period of five business days following receipt of funds

Contributions

Pool participants may make contributions to the LGIP-MMF on any business day. All contributions will be effected by electronic funds to the account of the LGIP-MMF designated by the State Treasurer. It is the responsibility of each pool participant to pay any bank charges associated with such electronic transfers. Failure to submit funds by a pool participant after notification to the State Treasurer of an intended transfer will result in penalties. Penalties for failure to timely submit will be assessed to the account of the pool participant responsible.

Notice of Wire contribution. To ensure same day credit, a pool participant must inform the State Treasurer of any contribution over one million dollars no later than 9 a.m. on the same day the contribution is made. Contributions for one million dollars or less can be requested at any time prior to 10 a.m. on the day of contribution. For all other contributions over one million dollars that are requested prior to 10 a.m., a pool participant may receive same day credit at the sole discretion of the State Treasurer. Contributions that receive same day credit will count, for earnings rate purposes, as of the day in which the contribution was made. Contributions for which no notice is received prior to 10:00 a.m. will be credited as of the following business day.

Notice of ACH contribution. A pool participant must inform the State Treasurer of any contribution submitted through ACH no later than 2:00 p.m. on the business day before the contribution is made. Contributions that receive same day credit will count, for earnings rate purposes, as of the day in which the contribution was made. Contributions for which proper notice is not received as described above will not receive same day credit, but will be credited as of the next business day from when the contribution is made. Contributions deposited by ACH will be unavailable for withdrawal for a period of five business days following receipt of funds.

Notice of contributions may be given by calling the Local Government Investment Pool (800-331-3284) OR by logging on to State Treasurer's Treasury Management System ("TMS"). Please refer to the [LGIP-MMF Operations Manual](#) for specific instructions regarding contributions to the LGIP-MMF.

Direct deposits from the State of Washington will be credited on the same business day.

Pricing. Contribution requests received in good order will receive the NAV per unit of the LGIP-MMF next determined after the order is accepted by the State Treasurer on that contribution date.

Withdrawals

Pool participants may withdraw funds from the LGIP-MMF on any business day. Each pool participant shall file with the State Treasurer a letter designating the financial institution at which funds withdrawn from the LGIP-MMF shall be deposited (the "Letter"). This Letter shall contain the name of the financial institution, the location of the financial institution, the account name, and the account number to which funds will be deposited. This Letter shall be signed by local officials authorized to receive and disburse funds, as described in WAC 210-10-020.

Disbursements from the LGIP-MMF will be effected by electronic funds transfer. Failure by the State Treasurer to transmit funds to a pool participant after proper notification to the State Treasurer to disburse funds to a pool participant may result in a bank overdraft in the pool participant's bank account. The State Treasurer will reimburse a pool participant for such bank overdraft penalties charged to the pool participant's bank account.

Notice of Wire withdrawal. In order to withdraw funds from the LGIP-MMF, a pool participant must notify the State Treasurer of any withdrawal over one million dollars no later than 9 a.m. on the same day the withdrawal is made. Withdrawals for one million dollars or less can be requested at any time prior to 10 a.m. on the day of withdrawal. For all other withdrawals from the LGIP-MMF over one million dollars that are requested prior to 10 a.m., a pool participant may receive such withdrawal on the same day it is requested at the sole discretion of the State Treasurer. No earnings will be credited on the date of withdrawal for the amounts withdrawn. Notice of withdrawals may be given by calling the Local Government Investment Pool (800-331-3284) OR by logging on to TMS. Please refer to the LGIP-MMF Operations Manual for specific instructions regarding withdrawals from the Fund.

Notice of ACH withdrawal. In order to withdraw funds from the LGIP-MMF, a pool participant must notify the State Treasurer of any withdrawal by ACH no later than 2 p.m. on the prior business day the withdrawal is requested. No earnings will be credited on the date of withdrawal for the amounts withdrawn.

Notice of withdrawals may be given by calling the Local Government Investment Pool (800-331-3284) OR by logging on to TMS. Please refer to the LGIP-MMF Operations Manual for specific instructions regarding withdrawals from the Fund.

Pricing. Withdrawal requests with respect to the LGIP-MMF received in good order will receive the NAV per unit of the LGIP-MMF next determined after the order is accepted by the State Treasurer on that withdrawal date.

Suspension of Withdrawals. If the State Treasurer has determined that the deviation between the Fund's amortized cost price per share and the current net asset value per share calculated using available market quotations (or an appropriate substitute that reflects current market conditions) may result in material dilution or other unfair results, the State Treasurer may, if it has determined irrevocably to liquidate the Fund, suspend withdrawals and payments of withdrawal proceeds in order to facilitate the permanent termination of the Fund in an orderly manner. The State Treasurer will distribute proceeds in liquidation as soon as practicable, subject to the possibility that certain assets may be illiquid, and subject to subsequent distribution, and the possibility that the State Treasurer may need to hold back a reserve to pay expenses.

The State Treasurer also may suspend redemptions if the New York Stock Exchange suspends trading or closes, if US bond markets are closed, or if the Securities and Exchange Commission declares an emergency. If any of these events were to occur, it would likely result in a delay in the pool participants' redemption proceeds.

The State Treasurer will notify pool participants within five business days of making a determination to suspend withdrawals and/or irrevocably liquidate the fund and the reason for such action.

Earnings and Distribution

LGIP-MMF Daily Factor

The LGIP-MMF daily factor is a net earnings figure that is calculated daily using the investment income earned (excluding realized gains or losses) each day, assuming daily amortization and/or accretion of income of all fixed income securities held by the Fund, less the administrative fee. The daily factor is reported on an annualized 7-day basis, using the daily factors from the previous 7 calendar days. The reporting of a 7-day annualized yield based solely on investment income which excludes realized gains or losses is an industry standard practice that allows for the fair comparison of funds that seek to maintain a constant NAV of \$1.00.

LGIP-MMF Actual Yield Factor

The LGIP-MMF actual yield factor is a net daily earnings figure that is calculated using the total net earnings including realized gains and losses occurring each day, less the administrative fee.

Dividends

The LGIP-MMF's dividends include any net realized capital gains or losses, as well as any other capital changes other than investment income, and are declared daily and distributed monthly.

Distribution

The total net earnings of the LGIP-MMF will be declared daily and paid monthly to each pool participant's account in which the income was earned on a per-share basis. These funds will remain in the pool and earn additional interest unless withdrawn and sent to the pool participant's designated bank account as specified on the Authorization Form. Interest earned will be distributed monthly on the first business day of the following month.

Monthly Statements and Reporting

On the first business day of every calendar month, each pool participant will be sent a monthly statement which includes the pool participant's beginning balance, contributions, withdrawals, transfers, administrative charges, earnings rate, earnings, and ending balance for the preceding calendar month. Also included with the statement will be the monthly enclosure. This report will contain information regarding the maturity structure of the portfolio and balances broken down by security type.

III. Management

The State Treasurer is the manager of the LGIP-MMF and has overall responsibility for the general management and administration of the Fund. The State Treasurer has the authority to offer additional sub-pools within the LGIP at such times as the State Treasurer deems appropriate in its sole discretion.

Administrator and Transfer Agent. The State Treasurer will serve as the administrator and transfer agent for the Fund.

Custodian. A custodian for the Fund will be appointed in accordance with the terms of the LGIP Investment Policy.

IV. Miscellaneous

Limitation of Liability

All persons extending credit to, contracting with or having any claim against the Fund offered in this Prospectus shall look only to the assets of the Fund that such person extended credit to, contracted with or has a claim against, and none of (i) the State Treasurer, (ii) any subsequent sub-pool, (iii) any pool participant, (iv) the LGIP, or (v) the State Treasurer's officers, employees or agents (whether past, present or future), shall be liable therefor. The determination of the State Treasurer that assets, debts, liabilities, obligations, or expenses are allocable to the Fund shall be binding on all pool participants and on any person extending credit to or contracting with or having any claim against the LGIP or the Fund offered in this Prospectus. There is a remote risk that a court may not enforce these limitation of liability provisions.

Amendments

This Prospectus and the attached Investment Policy may be amended from time to time. Pool participants shall receive notice of changes to the Prospectus and the Investment Policy. The amended and restated documents will be posted on the State Treasurer website: www.tre.wa.gov.

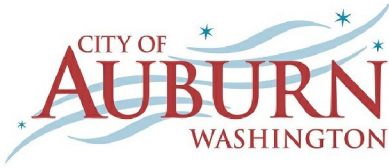
Should the State Treasurer deem appropriate to offer additional sub-pools within the LGIP, said sub-pools will be offered by means of an amendment to this prospectus.

LGIP-MMF Contact Information

Internet: www.tre.wa.gov Treasury Management System/TMS

Phone: 1-800-331-3284 (within Washington State)

Mail: Office of the State Treasurer
Local Government Investment Pool
PO Box 40200
Olympia, Washington 98504
FAX: 360-902-9044



AGENDA BILL APPROVAL FORM

Agenda Subject:

Annual Housing Repair Program Report (Tate) (20 Minutes)

Date:

August 6, 2019

Department:

Community Development

Attachments:

[Housing Repair Program Report PowerPoint](#)

Budget Impact:

Current Budget: \$0

Proposed Revision: \$0

Revised Budget: \$0

Administrative Recommendation:

Presentation

Background Summary:

The City of Auburn operates a Minor Housing Repair program, funded by CDBG, that offers low-income city residents grants for emergency home repairs. These grants enable homeowners to remain in safe and comfortable housing. Leaky roofs, unsafe stairs, floor repairs, accessibility improvements, and heating system repairs are examples of work funded with Housing Repair grants. This presentation will provide an overview of historical program trends and performance, as well as 2019 year-to-date accomplishments. It will also describe upcoming program changes that will enhance program efficiency and the overall customer experience.

Reviewed by Council Committees:

Councilmember: Trout-Manuel

Staff:

Tate

Meeting Date: August 12, 2019

Item Number:

COMMUNITY SERVICES

HOUSING REPAIR PROGRAM REPORT 2019

DUANNA RICHARDS AND
JOEL ASBJORNSEN
CITY COUNCIL STUDY SESSION
AUGUST 12, 2019

Department of Community Development

Planning • Building • Development Engineering • Permit Center
Sustainability • Community Services • Code Enforcement

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C E L E B R A T I O N

GENERAL FUND VS CDBG



■ General Fund Human Services dollars

- \$490,000
- Competitive funding for direct service nonprofit agencies
- Guided by Human Services Funding Priorities set by Council
- Approved by City Council every other year during budget process

■ CDBG dollars

- \$595,742*
- Funds support city's Housing Repair program, public facility ADA improvements, public services (limited), and some economic development activities
- Guided by Consolidated Plan and Annual Action Plans
- Approved by City Council every year

AUBURN'S HOUSING REPAIR PROGRAM

To qualify applicants must:

- Live inside Auburn city limits
- Own home needing repairs
- Have lived there at least one year & plan to stay at least one year after repairs are done
- Meet low to moderate income guidelines
 - 30% King County median income = up to \$23,250/year for one person
 - 50% King County median income = up to \$38,750/year for one person
- Once approved can access funds for up to 3 years

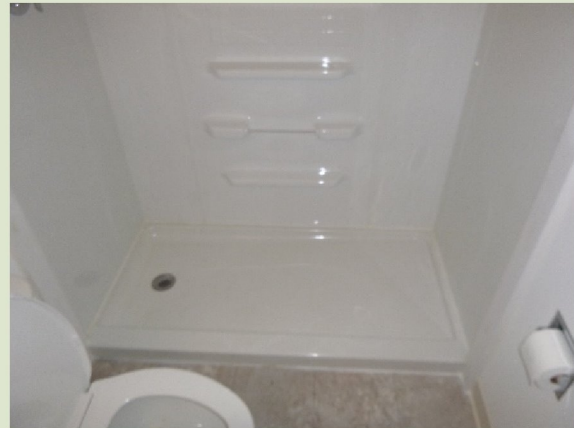
HISTORICAL FACTS AND FIGURES

FISCAL YEAR	2016	2017	2018	2019
Households served	56	72	69	38
Clients aged 62+	32	49	49	26
Female head of household	34	50	54	24
Disabled	36	41	35	19
Veteran	4	2	10	7
Under 30% AMI	47	51	50	22
30-50% AMI	9	21	19	16
Built before 1978	24	32	34	16
Average cost per household	\$3529	\$6208	\$5125	\$4952

2019 HOUSING REPAIR TRENDS

- Projects most frequently requested (there may be multiple projects per household):
 - Plumbing repairs -- 37
 - Water leaks, water heaters, ADA showers, sinks, toilets, clogged drains, shut off valves, faucets
 - Roofs/awnings -- 24
 - Flooring/walls/ceiling/mold damage – 22
 - Furnace/heat pumps/ducts – 14
 - Steps/porch/ramp/lift -- 13
 - Doors – 11

BEFORE & AFTER



HOUSING
REPAIR
DOLLARS
AT WORK

BEFORE & AFTER



HOUSING
REPAIR
DOLLARS
AT WORK

BEFORE & AFTER

HOUSING
REPAIR
DOLLARS
AT WORK



BEFORE & AFTER



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BEFORE & AFTER

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AT WORK



HOUSING REPAIR PROGRAM CHANGES

Current program

- Coordinator doesn't have construction background
 - Initial & Final Evals done by Building Inspectors – 2 done per week
- Contractors bid
 - Three bids
 - Slow response time, i.e. minor repairs become worse
 - Fewer contractors participating

Future program

- Housing Repair Coord. has construction knowledge
 - Will do Initial & Final Evals
 - Broaden scope to include health & safety
- Hiring HR Technician to do minor repairs before they become major
 - Will be able to respond quicker
 - Able to assist more clients with funds available

QUESTIONS?

Joel Asbjornsen

Housing Repair Program Coordinator

253-931-3099

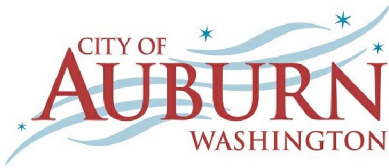
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Community Services Manager

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AGENDA BILL APPROVAL FORM

Agenda Subject:

Multi-Family Property Inspections (Tate) (15 Minutes)

Date:

August 6, 2019

Department:

Community Development

Attachments:

[1. Multi Family Property Inspection PowerPoint](#)

[2. National Health Housing Standard](#)

[3. Multi-Family Inspection Form](#)

Budget Impact:

Current Budget: \$0

Proposed Revision: \$0

Revised Budget: \$0

Administrative Recommendation:

DISCUSSION

Background Summary:

City Council requested information pertaining to multi-family property inspections in Auburn. The information provided will show how multi-family property inspections will work in Auburn, and how they will interact with current programs. This would also provide Code Compliance Officers additional tools related to the enforcement of the Auburn City Code and the IPMC (International Property Maintenance Code)

Code Compliance staff seeks input pertaining to the recommendations, and looks to bring code amendments back to a future City Council session.

Reviewed by Council Committees:

Councilmember: Trout-Manuel

Staff: Tate

Meeting Date: August 12, 2019

Item Number:

CODE COMPLIANCE DIVISION

MULTI-FAMILY PROPERTY INSPECTIONS

CHRIS BARACK

**CODE COMPLIANCE SUPERVISOR
CITY COUNCIL STUDY SESSION
AUGUST 12, 2019**

Department of Community Development

Planning • Building • Development Engineering • Permit Center
Sustainability • Community Services • Code Enforcement

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C E L E B R A T I O N

INTRODUCTION

- During the April 22, 2019 Study Session staff provided City Council with a presentation on multifamily programs and tenant protections.
- The presentation included an overview of state laws that allow for mandatory multifamily inspection programs and nearby cities that have implemented such programs.
- City Council expressed interest in understanding what a program would look like in Auburn.
- Staff requested that Council allow further research in the following areas:
 - Code enforcement data and experience with respect to complaints about multifamily living conditions.
 - Tools that code enforcement believes would improve the city's ability to address multifamily living conditions.
- The presentation is the follow up to the April 22, 2019 Council discussion.

WHERE WE ARE TODAY

There are approximately 470 licensed multi-family properties (duplex or greater) in the City of Auburn. Prior to 2016, these properties operated with no real direction or expectation from the City. In 2016, the City implemented the S.A.F.E.R program. This program not only required the owners and/or manager to attend a mandatory 8 hour training, but set the ground rules and expectations that the City had on them.

Over the past three years, we have achieved approximately 98% voluntary compliance with this training program and just 2% were mandated to attend through Code Enforcement action.

Through the years of working collaboratively with property owners and managers, the Code Compliance Division has built a solid rapport.

Currently, multi-family property owners and managers can participate in a voluntary inspection program through the City (See Exhibit A). The inspection is conducted by the Code Compliance division and focuses on the exterior of the property only. To date, we have conducted 25 voluntary inspections. Of the 25 inspected properties, all had 1 or more “violations.” Even though the violations on these properties took time and money to correct, there were all done without formal code enforcement action.

The Code Compliance division also requires mandatory inspections of properties that are referred to us by Auburn Police Department. This inspection also focuses on only the exterior of the property.

NATIONAL HEALTHY HOUSING STANDARDS & IPMC

Examples of “enhancements” to the current codes

IPMC

- 304.18 Security – lockable doors/windows required
- 404.2 Kitchen – size requirement, cook/sleep area separated, light required
- 302.5, 304.5 Rodents – extermination from structure/exterior, no approved methods of extermination

HEALTHY HOUSING STANDARDS

- 3.2 Security – rekey locks with change of tenancy
- 2.4 Kitchen – range/vent, oven required
- 6.3 Pest Management – Professional Integrated Pest Management (IPM)

MANDATORY INSPECTIONS



PRO'S

- All multi-family properties will be inspected every 3-5 years
- Better living conditions for all Auburn multi-family residents
- Vulnerable populations are less likely to report



CON'S

- Penalizes compliant/model properties who embrace healthy housing standards
- Added costs to properties that could be passed onto residents
- Unhealthy living conditions could lead to homelessness
- Tenant induced conditions could penalize property owners

COMPLIANCE BASED INSPECTIONS



PRO'S

- Will not adversely affect compliant/model properties
- Better living conditions for Auburn multi-family residents living in unhealthy conditions
- Will promote best management practices with property owners

CON'S

- Added costs to properties that could be passed onto residents
- Unhealthy living conditions could lead to homelessness
- Vulnerable populations are less likely to report

WHAT NOW?

What are our options?

Option #1

- Adopt National Healthy Housing Standards
- Require mandatory inspections of all multi-family properties duplex and larger every 3-5 years
- Hire additional resources for implementation and management of the program

Option #2

- Adopt National Healthy Housing Standards
- Require mandatory inspections for properties that are referred by Auburn Police or have 3 or more code violations in any 12 month period
- Amend Title 5 and/or 15 to support Healthy Housing Standards
- Current Code Compliance staff will oversee cases involving mandatory inspections
- Continue to promote Healthy Housing Standards through outreach and education

RECOMMENDATION

- Bring forward to Mayor and Council amendments to Title 5 and/or Title 15 which support Healthy Housing Standards
- Adopt National Healthy Housing Standards
- Require mandatory inspections for properties with 3 or more confirmed code compliance violations in a 12 month period

THANK YOU!

QUESTIONS?

Department of Community Development

Planning • Building • Development Engineering
Permit Center • Code Enforcement • Environmental

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AUBURN
VALUES

S E R V I C E

E N V I R O N M E N T

E C O N O M Y

C H A R A C T E R

S U S T A I N A B I L I T Y

W E L L N E S S

C E L E B R A T I O N

National Healthy Housing Standard



National Healthy Housing Standard

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Foreword and Acknowledgments

FOREWORD

Housing is one of the best known and documented determinants of health. The affordability, location, and quality of housing have all been independently linked to health. Poor quality housing and blighted neighborhoods diminish property values, increase crime, and erode the cohesiveness and political power of communities. Despite the critical role of housing in public health, attention to U.S. housing conditions remains incommensurate with its importance to our wellbeing. One illustration of this is the number of homes in substandard condition. Despite setting a national goal in Healthy People 2010 to reduce the number of units in substandard condition by 52 percent, we have made no progress. There were 6.3 million units in substandard conditions in 2001; 6.3 million units remain substandard in 2011 according to the most recent American Housing Survey.

More than a century ago, growing concern about the toll of infectious diseases such as tuberculosis, typhoid, and dysentery in America spurred a national public health movement aimed at eradicating inadequate housing conditions. The effort yielded important housing improvements that dramatically curbed the outbreak of communicable diseases. In the decades that followed, the public health community became less involved with housing as separate governmental departments were established to develop and enforce housing and building codes. This separation of public health and housing has challenged the nation's ability to mount a successful campaign to improve the quality of housing and neighborhoods.

We at the National Center for Healthy Housing (NCHH) and the American Public Health Association (APHA) have created this evidence-based National Healthy Housing Standard as a tool to reconnect the housing and public health sectors and as an evidence-based standard of care for those in the position of improving housing conditions. We have drawn from the latest and best thinking in the fields of environmental public health, safety, building science, engineering, and indoor environmental quality.

Our focus in the National Healthy Housing Standard is the over 100 million existing homes in our country that offer the most significant opportunity to protect public health and reduce health disparities. Although new homes are typically safer and healthier, having been built to modern building standards, technologies and regulations, and to ever-changing consumer expectations, the new construction market remains a fraction of the overall housing stock in the country. In contrast, regulations and industry practices affecting existing owner-occupied and rental housing, the focus of this document, have not kept pace with our knowledge about housing-related disease and prevention of disease and injury through routine maintenance.

The consequences of not dealing with substandard housing are dire in both human wellbeing and cost:

- About 20-30 percent of asthma cases are linked to home environmental conditions.
- 21,000 lung cancer deaths result from radon in homes.
- Over 24 million homes that have lead-based paint hazards put children at risk of the irreversible disease of childhood lead poisoning.
- Home injuries are the leading causes of death for young children and put 6 million adults over 65 in hospitals and nursing homes due to preventable falls.

We can do better. We can make our homes smart, at least as smart as our phones. For example, carbon monoxide detectors can alert us to life threatening situations. Modern efficient ventilation systems can keep us comfortable, control humidity, and provide clean fresh air. More resilient homes can handle climate chaos, withstanding storms and wild swings in temperature with proper insulation, air sealing, structural integrity, and moisture control and more. Grab bars, handrails, and ample lighting will help accommodate our aging population. These are the homes in which today's families want to live and grow old and that future generations deserve.

We know that to bring about our vision of ensuring that all people live in safe and healthy homes, we will need to marshal political will and financial resources. Regulations are one important way to address unhealthy housing, but we can also achieve our vision by arming the private sector with the right information. In every community, property

owners, advocates, code officials, public health leaders, and others are positioned to recognize and coordinate their shared missions of keeping people safe and healthy in the places they live. We hope the Standard will inspire action and cross sector collaboration. Most of all, we hope through the implementation of this Standard we will save lives, shrink disparities, and ensure our nation's homes are the safe havens they were meant to be.

Georges C. Benjamin, MD, FACP, Executive Director, American Public Health Association

Thomas M. Vernon, MD, Chair, National Center for Healthy Housing; Chair, National Committee on Housing and Health

May 16, 2014

ACKNOWLEDGMENTS

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NCHH Staff:

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Dave Jacobs, Research Director

Jane Malone, Policy Director

Rebecca Morley, Executive Director

The basis for this document is Housing and Health: Recommended Minimum Housing Standards, which was published in 1986 by the American Public Health Association and the U.S. Centers for Disease Control and Prevention.

Support for the development of the Standard was provided under a grant agreement between The Kresge Foundation and the National Center for Healthy Housing. The contents of this report are solely the responsibility of the authors and do not necessarily represent the official views of The Kresge Foundation.

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- Sections 302.2, 302.6, 303.2, 303.18.1, 304.2, 305.4, 402.1, 402.2, 403.1, 403.2, 403.5, 404.3, 404.4.3, 505.4, 602.2.2, 602.2.3, 603.2, 603.3 of the 2012 International Property Maintenance Code.
- Section 1210.2 of the 2012 International Building Code.
- Sections 907.2.11.2, 907.2.11.3 of the 2012 International Fire Code.
- Sections 424.3, 424.5, 501.6, 504.4, 504.6 of the 2012 International Plumbing Code.
- Sections E3901, E3902.1, M1901.1, P2713, P2708.3, P3009, R310.1, R310.2, R310.2.1, R311.7.5, R311.7.8, R312.1.1, R312.1.2, R312.1.3, R312.2.1 of the International Residential Code.

USING THIS DOCUMENT

The Standard provides health-based provisions to fill gaps where no property maintenance policy exists and also a complement to the International Property Maintenance Code and other policies already in use by local and state governments and federal agencies for the upkeep of existing homes. The Standard bridges the health and building code communities by putting modern public health information into housing code parlance. The Standard is written in code language to ease its adoption, although we anticipate that states, localities, and other users will tailor it to local conditions.

The Standard consists of seven chapters and a section of definitions. The annotated version of the Standard explains the public health rationale for each provision, and provides references and resources for more information. Individually and together, the Standard constitutes minimum performance standards for a safe and healthy home. In developing the Standard we found a variety of provisions that could be added to further enhance the health and safety of the home, but that would be difficult to achieve during property maintenance due to cost or feasibility. We have included those provisions as “stretch” measures for users who want to go above the minimum requirements or who can integrate compliance with the provisions during property renovation. We encourage the adoption of the stretch provisions wherever feasible.

June 2018 Update

Since the development and release of the Standard, NCHH, APHA, and other partners have developed companion tools and resources to help communities use the Standard to assess and improve their housing codes:

- NCHH completed comparisons of local code to the Standard with customized recommendations for improvement in 25 communities. At least two communities have incorporated all or part of the Standard’s provisions into their local codes. On October 5, 2015, the Tukwila (WA) City Council adopted Ordinance No. 2481, which incorporates the Standard within their local property maintenance code. On September 8, 2015, Dallas code officials, with the support of a coalition of local health and housing providers and NCHH, presented plans to the Housing Committee of the Dallas City Council to update the local property code. The proposed changes included adoption of provisions in the Standard addressing pests, moisture, and excessive temperatures. In September 2016, the city council voted 12-1 to overhaul the city’s housing standards and require code inspections of all rental homes.
- In 2015, NeighborWorks America funded NCHH to develop an implementation tool, which is intended to help with voluntary adoption of the Standard. In 2014-2015, NeighborWorks and NCHH considered the applicability of the Standard for NeighborWorks organizations. NCHH talked to developers, managers, and maintenance staff of large-scale multifamily buildings, scattered-site developments, and those who work primarily in single-family housing programs. Their insights were the basis for the creation of the implementation tool, which NCHH views not only as a maintenance standard but also as a living document that highlights positive actions developers can take, regardless of their housing stock or the stage of the development process. The implementation tool presents the Standard in abbreviated form to facilitate identification of actions most relevant for different user groups.
- NCHH developed an online tool that enables communities to compare their current housing/property maintenance code to the Standard. To complete the online self-assessment, communities are guided through a set of questions to help them rate their local codes against each of the Standard’s provisions. Embedded tips assist communities in locating relevant codes and understanding how to make a comparison. The tool consists of flexible modules so that a community only interested in pest management can focus their efforts on rating and receiving recommendations from relevant provisions. After completing each module, communities receive a customized report with recommendations for improving their local codes.

Through the Standard and companion resources (available at nchh.org/tools-and-data/housing-code-tools/), NCHH and APHA continue their work to empower and equip communities to improve health by improving housing quality. The National Healthy Housing Standard is an evidence-based tool that continues to inspire action and cross-sector collaboration to improve housing conditions.

Requirements and Stretch Provisions

1. DUTIES OF OWNERS AND OCCUPANTS

1.1. Duties of Owners.

The owner has the duty to ensure that the structure, dwelling, dwelling unit, common areas, and premises are maintained in a safe and healthy condition, in compliance with this Standard and other applicable requirements.

1.1.1. The owner shall ensure the collection of trash and recyclables and provide and maintain trash containers, bulk storage containers, recycling containers, and areas where the containers are stored.

1.1.2. The owner shall maintain the building and premises to keep pests from entering the building and dwelling units, inspect and monitor for pests, and eliminate pest infestation in accordance with integrated pest management methods.

1.1.3. The owner shall provide occupants with at least 48 hours written notice of the planned use of a chemical agent such as a pesticide or herbicide, the date and location of application, and a copy of the warning label.

1.1.4. The owner shall not cause or allow any water, sewage, electrical, or gas service, facility, or equipment required for safe and healthy occupancy to be removed, shut off, or discontinued for any occupied dwelling, except for such temporary interruption as may be necessary while repairs or alterations are being performed, or during temporary emergencies requiring discontinuance of service. This provision does not apply where the occupant has contractual control over the service and shall not be interpreted as preventing a utility company from discontinuing service for reasons allowed by law.

1.1.5. The owner shall investigate occupant reports of unsafe or unhealthy conditions, respond in writing, and make needed repairs in a timely manner.

1.2. Duties of Occupants.

The occupant shall properly use and operate the dwelling unit and owner-supplied fixtures and facilities controlled by the occupant in order to maintain a safe and healthy environment within the dwelling unit, and report unsafe or unhealthy conditions, including breakdowns, leaks, and other problems requiring repair to the owner in a timely manner.

1.2.1. The occupant shall place trash and recyclables in the appropriate containers.

1.2.2. The occupant shall work with the owner to ensure pest-free conditions in accordance with integrated pest management.

1.2.3. If the occupant's action leads to pooling of water or another excessive moisture problem inside the dwelling unit, the occupant shall clean up and dry out the area in a timely manner.

2. STRUCTURE, FACILITIES, PLUMBING, AND SPACE REQUIREMENTS

2.1. Structure.

Every foundation, roof, floor, exterior and interior wall, ceiling, inside and outside stair, porch, trim, accessory structure, fence, door, window, and window glass shall be safe to use and capable of supporting the intended design loads and load effects and shall be in good condition.

2.2. Facilities.

Every plumbing fixture and pipe, chimney, flue, smoke pipe, and every other facility, piece of equipment, or utility shall be installed in conformance with applicable statutes, ordinances, and regulations.

2.2.1. Mechanical, utility, and heating equipment shall be separated from habitable rooms. In multifamily buildings, equipment rooms shall be locked.

2.3. Plumbing System.

Every plumbing fixture, stack, vent, water, waste, and sewer pipe shall be properly installed, maintained in a safe and functional order, and kept free from obstructions, leaks, and defects.

2.3.1. An approved potable water supply system shall provide an adequate amount of running water under pressure to all fixtures simultaneously.

2.3.2. An adequate supply of heated running water under pressure shall be supplied to sinks, bathtubs, showers, and laundry facilities. Water heaters shall be set at a minimum temperature of 110° F (43° C). At bathtub faucets and shower heads, the maximum temperature shall be 120° F (49° C). Heated water shall be provided by either a tank-type or tankless water heater. A tank-type water heater shall have a temperature/pressure relief valve that discharges to a drip pan, storage tank, or the outside. The temperature of water discharged from a tankless water heater shall not exceed 140° F (60° C).

2.3.3. Every waste pipe shall be connected to a public sewer system, an approved private sewage disposal system, or the dwelling's graywater system. No toilet waste pipe shall be connected to a graywater system. The drainage system shall have a cleanout.

2.3.4. Faucet discharge points shall be located above the overflow rim of sinks, tubs, or other fixtures that collect water.

✓ Stretch Provisions:

- Bathtub and shower faucets shall have anti-scald devices, such as an automatic temperature control mixing valve, water temperature limiting device, or temperature-actuated flow reduction valve.
- Each dwelling unit in multifamily housing shall have a separate meter for water supplied to the unit.
- Multifamily housing with one or more central water heaters shall comply with ASHRAE Standard 188P to assess and manage the risks associated with Legionella in building water systems.
- A private water supply shall be tested annually to ensure that water does not have biological or chemical contaminants.
- If there is a suspected risk of excessive lead in drinking water supplied by a public water utility, the water shall be tested. The risk factors shall include, but are not limited to, presence of an occupant with a blood lead level of five micrograms per deciliter or more, pipes made of lead or leaded brass, test results indicating that the lead level in the public water supply exceeds federal limits, and plumbing repair work that has disturbed water supply components (such as faucets, valves, pipes, meters, pressure regulators, backflow preventers, lead-soldered joints, or service lines). If the lead level in the water sample exceeds 15 parts per billion, there shall be an investigation of the possible sources(s) to determine the appropriate course of action. If warranted, lead and brass-containing components shall be replaced.

2.4. Kitchen.

Every dwelling unit shall have a kitchen equipped with the following:

2.4.1. A kitchen sink in good working condition that is properly connected to heated and unheated water supplies and waste pipes. Any provided dishwasher and components of the sink, including disposal and water filtration devices, shall be in good working condition and properly connected.

2.4.2. A counter for food preparation and cabinets and/or shelves sufficient to store occupants' food that does not require refrigeration and eating, drinking, and food preparation equipment. Cabinets shall have tight-fitting doors and no gaps between any surfaces. The counter, countertop edges, cabinets, and shelves shall be of sound construction and furnished with surfaces that are impervious to water, smooth, and cleanable.

2.4.3. A range for cooking food. The range shall be properly installed with all necessary connections for safe and efficient operation and shall be maintained in good working condition.

2.4.3.1. The range shall include an oven unless both a separate oven, other than a microwave oven, and a cooktop are provided. A hot plate is not an acceptable substitute for burners on a range or cooktop. The range or cooktop shall have a vertical clearance of not less than 30 inches (762 mm) from above its surface to unprotected combustible material. Reduced clearances are permitted in accordance with the listing and labeling of the range hood.

2.4.3.2. Ventilation for the range shall be provided in accordance with Subsection 5.3.

2.4.4. A refrigerator with a freezer. The refrigerator shall be in good working condition, of sufficient size to store occupants' food that requires refrigeration, and capable of maintaining a temperature less than 41° F (6° C) but more than 32° F (0° C). The freezer section shall be capable of maintaining a temperature below 0° F (-18° C).

2.4.4.1. If the lease does not provide for a refrigerator, adequate connections for the occupant's installation and operation of a refrigerator shall be provided.

2.4.5. A kitchen floor in good condition with a sealed, water-resistant, nonabsorbent, and cleanable surface.

✓ Stretch Provisions:

- Cabinets and countertops shall be constructed of materials that are rated No-Added Formaldehyde (NAF) or Ultra-Low-Emitting Formaldehyde Resins (ULEF).
- Wall surfaces immediately adjacent to the range, sink, and counter shall be covered with an impervious finish.
- The joints where a wall meets a cabinet or counter, and where a counter meets a stove or sink, shall be sealed or covered to permit thorough cleaning and deter pests.
- Enclosed cabinets (as opposed to a combination of shelves and cabinets) sufficient to store occupants' food that does not require refrigeration shall be provided.
- Freestanding stoves shall have brackets to prevent tip-over.

2.5. Bathroom.

Every dwelling unit shall have a private bathroom equipped with the following:

2.5.1. A toilet in good working condition that is sealed to the waste pipe and affixed to the floor and properly connected to both the dwelling's water supply and a waste pipe leading to an approved sewage system or private waste disposal system.

2.5.2. A sink in good working condition, with a stable connection to the wall or secure attachment to the floor that is properly connected to the heated and unheated potable water supply and a sealed trap leading to a waste pipe.

2.5.3. A bathtub or shower in good working condition that is properly connected to the heated and unheated potable water supply and a waste pipe. The bottoms of bathtubs and shower floors shall have permanent or removable nonslip surfaces.

2.5.4. Cleanable nonabsorbent water-resistant material on floor surfaces and extending on bathroom walls at least 48 inches (122 cm) above a bathtub and 72 inches (183 cm) above the floor of a shower stall. Such materials on walls and floors shall form a watertight joint with each other and with the bathtub or shower.

2.5.5. Ventilation for the bathroom provided in accordance with Subsection 5.3.

 Stretch Provisions:

- Grab bars shall be firmly anchored to the wall adjacent to each bathtub, shower, and toilet in accordance with the Americans with Disabilities Act Design Guidelines.
- Tub and shower enclosures composed of tile or panel assemblies with caulked joints shall be installed over moisture-resistant backing material, such as cement board. Paper-faced wallboard shall not be used behind such tub and shower enclosures. Monolithic tub and shower enclosures (e.g., fiberglass with no seams) are exempt from these limitations unless required by the manufacturer.

2.6. Minimum Space.

The dwelling shall provide privacy and adequate space for sleeping and living.

2.6.1. A bedroom shall not be the only passageway to the only bathroom in a dwelling unit with more than one bedroom.

2.6.2. A bathroom or toilet room shall not be the only passageway to any habitable room, hall, basement, or the exterior of the dwelling.

2.6.3. Every habitable room shall have a minimum floor area of 70 ft² (6.5 m²).

2.6.4. Every dwelling shall have closet space or other storage space to store occupants' clothing and personal belongings.

2.6.5. The ceiling height of any habitable room shall be at least 84 inches (213 cm). In a habitable room with a sloping ceiling, at least one-half of the floor area shall have a ceiling height of at least 84 inches (213 cm). If any part of a room has a ceiling height lower than 60 inches (152 cm), its floor area shall not be considered in computing the floor area of the room.

2.6.6. A habitable room located partly or totally below grade shall be provided with natural light by windows in accordance with Subsection 4.3, and ventilation in accordance with Subsection 5.3. In such a room, the ceiling and any ducts, pipes, and other obstructions shall be at least 84 inches (213 cm) above the floor throughout the room, and walls and floors shall be waterproof and free of dampness.

2.7. Floors and Floor Coverings.

Floors and floor coverings shall be attached at each threshold, maintained in safe and healthy condition, capable of being cleaned, and free of bulges and buckling. Carpets shall have no tears, folds, or bumps.

 Stretch Provisions:

- Floor coverings shall consist of low-pile carpet or nonabsorbent material such as hardwood, tile, or resilient flooring. Carpet and other floor coverings shall be certified as having low volatile organic compound (VOC) emissions, and any adhesives, padding, or other materials used in installing the floor covering shall be certified as having no VOCs or low VOC emissions, and having no perfluorocarbons or halogenated flame retardants.
- Walk-off entry mats shall be provided inside or outside each entryway that leads to the outdoors.

2.8. Noise.

The structure and facilities shall be maintained so that the noise level in the interior of the dwelling unit caused by exterior sources is below 45 dB L_{dn} (day-night equivalent sound level).

✓ **Stretch Provisions:**

- Nighttime noise levels within bedrooms shall not exceed 30 dB LA_{eq} measured over eight hours.
- HVAC equipment, including intermittent ventilation fans, shall operate at a noise level that creates no more than 45 dB L_{dn} in habitable rooms.
- Wall and ceiling assemblies shall meet performance standards to attenuate exterior sound reaching occupants or be constructed using materials with sound-dampening acoustical properties.
- Roof material, chimney baffles, exterior doors, mail slots, attic ventilation ports, wall-mounted air conditioners, and other building components that have the potential to admit excessive noise shall be configured to minimize sound intrusion.
- Windows shall be sealed, made weathertight, and caulked to minimize sound intrusion when closed.

3. SAFETY AND PERSONAL SECURITY

3.1. Egress.

In accordance with local fire codes, every dwelling unit shall have at least two means of egress that serve as emergency escapes and rescue openings. Each egress shall lead outside without passing through another dwelling unit.

3.1.1. Egress routes shall be unobstructed. Doors along egress routes shall be openable from the inside without the use of a key or tool.

3.1.2. Any bedroom located below the fourth floor shall be provided with an exterior window openable from the inside that can be used as a means of emergency egress.

3.1.3. If a habitable room partly or totally below grade is intended for sleeping purposes, at least one exterior window shall be openable from the inside and accessible for easy and ready use as an emergency exit. The window shall have the following minimum dimensions: a net clear opening of 5.7 ft² (0.53 m²); 24 inches (61 cm) from the top of the sill to the bottom of head of the window frame; a width of 20 inches (51 cm); and a sill height of not more than 44 inches (112 cm) from the floor.

3.1.3.1. If the window opening sill height is below ground elevation, the horizontal dimension (width times projection) of the window well shall be at least nine ft² (0.84 m²) and the horizontal projection shall extend at least 36 inches (91 cm) from the exterior side of the window.

3.1.3.2. If the egress window well is deeper than 44 inches (112 cm) below ground elevation, there shall be steps or a ladder permanently attached to serve as an emergency exit to ground elevation. The distance between steps or rungs shall be 18 inches (46 cm), their width shall be at least 12 inches (31 cm), and their projection from the wall shall be between three and six inches (7.6 and 15 cm).

3.1.3.3. A door leading directly from the room to the outside that provides an exit at grade level shall fulfill this requirement.

3.2. Locks/Security.

Means of egress (i.e., windows and/or doors) from dwellings shall have locks.

3.2.1. Following each change in tenancy, the locking devices on the dwelling unit entry doors shall be changed.

3.2.2. Dwelling unit entry doors shall be equipped with a dead bolt lock with a minimum throw of one inch (2.54 cm) and that is capable of being opened from the interior side without a key and a device that permits the occupant to see a person at the entry door without fully opening the door.

3.2.3. Exterior doors on multifamily buildings with a common entry that leads into a foyer or hallway shall have a self-closing mechanism and shall be equipped with a locking device capable of being opened from the interior side without a key.

3.2.4. Exterior windows that are capable of being opened and are potential means of entry shall be equipped with a lock on the interior side.

3.3. Smoke Alarm.

Every dwelling unit shall have a functioning smoke alarm located on the ceiling outside each sleeping area in the immediate vicinity of the bedrooms, in each additional room used for sleeping purposes, and on every level except crawlspaces and uninhabitable attics. In dwellings or dwelling units with split levels that have no door between adjacent levels, the smoke alarm installed on the upper level shall suffice for the adjacent lower level. In the event a smoke alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.3.1. In multifamily housing, a tamper-proof smoke detection system (interconnected with a central fire alarm system) or stand-alone smoke alarms in good working condition shall be installed on each level including basements, in heating system and storage rooms, in garages, and in other common areas.

3.3.2. Battery-operated smoke alarms and the battery backup for hardwired smoke alarms shall be powered with long-lasting batteries.

3.3.3. Alternative visual notification shall be provided for hearing-impaired occupants.

✓ **Stretch Provisions:**

- Smoke alarms shall be hardwired with battery backup.
- Smoke alarm batteries shall be sealed-in and tamper-proof.
- Multiple smoke detection stations shall be interconnected.
- Every dwelling unit shall have both a photoelectric smoke alarm and an ionization smoke alarm.

3.4. Fire Extinguisher.

Fire extinguishers shall be rated Class ABC and shall be readily accessible.

3.4.1. Each dwelling unit shall have at least one 10-pound fire extinguisher in good working condition in or near the kitchen.

3.4.2. In multifamily housing, there shall be fire extinguishers in common areas on each floor and in areas where flammable or combustible liquids are stored, used, or dispensed. The fire extinguishers shall be located in conspicuous, unobstructed locations that are not obscured from view.

✓ **Stretch Provision:**

- The dwelling shall have an automatic fire sprinkler system that complies with the applicable locally adopted fire code. If the local fire code has no sprinkler requirement or if no local fire code exists, the installed automatic fire sprinkler system shall comply with either the International Fire Code® or the National Fire Protection Association Standard 1.

3.5. Carbon Monoxide Alarm.

Every dwelling unit shall have at least one functioning carbon monoxide (CO) alarm on every habitable floor and outside each separate sleeping area, in the immediate vicinity of every bedroom. In the event a CO alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.5.1. Battery-operated CO alarms shall be powered with long-lasting batteries. Hardwired CO alarms shall have long-lasting battery backup.

3.5.2. Alternative visual notification shall be provided for hearing-impaired occupants.

✓ **Stretch Provisions:**

- CO alarms and combination smoke/CO alarms shall include voice notification.
- If a combination ionization sensor smoke/CO alarm is used, a second smoke alarm utilizing photoelectric smoke sensors shall be installed.
- CO alarm batteries shall be sealed-in and tamper-proof.
- CO present at or above 30 ppm (35 mg/m³) when measured over one hour, or above nine ppm (10.5 mg/m³) measured over eight hours, shall be deemed hazardous. The cause of a hazardous indoor CO level shall be investigated to identify and eliminate its source.

3.6. Walking Surfaces.

Every interior and exterior stairway, ramp, deck, porch, and balcony shall be maintained structurally sound, in good repair, properly anchored, and capable of supporting the imposed loads.

3.6.1. Treads on exterior stairways shall have nonskid surfaces.

3.6.2. Every interior and exterior stairway with four or more risers shall have at least one structurally sound continuous handrail installed not less than 34 inches (86.7 cm) and not more than 38 inches (96.5 cm), measured vertically from above the nose of the tread. The handrail shall be firmly fastened, capable of supporting a load of 300 pounds, and in good condition. If a side of a stairway is open to the floor or grade below, and the handrail provides the guard required by Subsection 3.7, the rail shall be supported by balusters 34 to 38 inches (86.7 to 96.5 cm) in height, measured vertically from the nose of the tread.

 Stretch Provisions:

- Every interior and exterior stairway shall have uniform risers and treads. Risers shall be no higher than 7¾ inches (19.6 cm) and treads shall be at least 10 inches (25.4 cm) deep, unless the existing space and construction do not allow a reduction in pitch or slope.
- Interior and exterior stairways shall have handrails on both sides. Railings shall have a graspable perimeter measuring four to six inches (10–16 cm), and if noncircular in shape, shall have no sharp corners and a width no smaller than five-eighths inch (1.5 cm).

3.7. Guards.

3.7.1. Every stairway, porch, patio, landing, and/or balcony located more than 30 inches (76.2 cm) above an adjacent area shall have a structurally sound guard between 30 inches (76.2 cm) and 42 inches (107 cm) high, measured vertically from the floor. The guard shall be firmly fastened, capable of supporting normally imposed loads, capable of being opened in case of emergency, and in good condition. Balusters with a minimum thickness of one-half inch (13 mm) shall be placed at intervals that do not allow passage of a sphere greater than four (10.2 cm) inches in diameter. There shall be no climbable cross pieces. If the balusters do not reach the floor, the narrowest opening between the bottom of the stair guard and the floor shall be a maximum of four inches (10.2 cm).

3.7.2. If the vertical distance from the top of the sill of an exterior window opening to the finished grade or other surface below is greater than 72 inches (183 cm), and the vertical distance from the top of the sill to the floor of the room is less than 36 inches (91.5 cm), the window shall have a fall prevention device compliant with ASTM F2006 or ASTM F2090.

3.7.2.1. The fall prevention device for a window that provides access to a fire escape or is otherwise designated for emergency egress shall be compliant with ASTM F2090.

3.8. Chemical Storage.

3.8.1. Each dwelling unit shall have a cabinet or other storage space that is lockable or not readily accessible to children for the storage of medicine and household chemical agents.

3.8.2. Storage space for flammable and combustible liquids shall be available either in a building separate from the dwelling's habitable space or in an adjacent space that is not connected to the dwelling's ventilation system.

3.9. Pools, Hot Tubs, and Other Water Features.

3.9.1. Swimming pools, hot tubs, spas (except a residential spa or hot tub with a safety cover complying with ASTM F 1346-91), ornamental ponds, and other water features that hold water more than 24 inches (61 cm) in depth shall be completely surrounded by a fence or barrier at least 48 inches (122 cm) in height above the finished ground level that is accessible only through a self-closing and self-latching gate. The gate's latch shall be located 54 inches (137 cm) above the bottom of the gate on the interior side of the gate facing the water feature. The fence and gate shall not have climbable crosspieces.

3.9.2. All pools and spas shall have anti-entrapment drain covers compliant with ANSI/ASME A112.19.8, ANSI/APSP 16-2011, or any successor standard, on every suction outlet.

3.9.3. Pool drains and drain covers shall be clearly visible and in good repair. Where there is a single main drain (other than an unblockable drain), a second anti-entrapment system shall be installed.

3.9.4. Luminaries, receptacles, and other outlets shall have ground fault circuit interrupter (GFCI) protection.

4. LIGHTING AND ELECTRICAL SYSTEMS

4.1. Electrical System.

Every dwelling unit shall have electric service, outlets, and fixtures that are grounded and installed properly, maintained in good and safe working condition, and connected to a source of electric power.

4.1.1. Every dwelling unit shall be supplied with a three-wire, 120/240-volt, single-phase electrical service that is not shared with another dwelling unit.

4.1.2. Temporary wiring or extension cords shall not be used as permanent wiring.

✓ **Stretch Provision:**

- The electrical service shall have a rating of not less than 100 amperes.

4.2. Outlets.

Every habitable room shall have at least two separate and remote grounded duplex electric receptacle outlets.

4.2.1. Each kitchen and each room containing a toilet, sink, bathtub, or shower stall shall have at least one grounded duplex electric receptacle outlet protected by a ground-fault circuit interrupter (GFCI).

4.2.2. Receptacle outlets in garages, crawl spaces, unfinished basements, and outdoors shall be protected by GFCIs.

✓ **Stretch Provisions:**

- Habitable rooms shall have sufficient electric receptacle outlets so that no location on a wall is more than six feet from an outlet.
- Every countertop space 12 inches (305 mm) or wider shall have a grounded duplex electric convenience receptacle outlet protected by a GFCI. No section of counter shall be more than 24 inches (610 mm) measured horizontally from an outlet.
- Receptacle outlets in habitable rooms that are not protected by GFCIs shall be protected by arc-fault circuit interrupters (AFCIs).

4.3. Natural Lighting.

Every habitable room shall receive daylight from at least one exterior window or skylight.

4.3.1. If a habitable room receives daylight from an adjacent room or area used seasonally, such as a porch, the daylight through this interconnection shall be available year-round.

4.3.2. Every bathroom and kitchen shall comply with the daylight requirement for habitable rooms contained in this section, unless the room is equipped with a ventilation system consistent with Subsection 5.3.

4.4. Artificial Lighting.

Each room containing a toilet, sink, bathtub, or shower stall shall contain at least one ceiling- or wall-type electric lighting fixture. Each non-habitable room, including laundry rooms, furnace rooms, and public halls, shall contain at least one ceiling- or wall-type electric lighting fixture.

4.4.1. Light switches that control ceiling- or wall-type electric light fixtures shall be located conveniently for safe use.

4.4.2. Every public hall, exterior entry door, and stairway in multifamily housing shall be illuminated at all times by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area. The distance between light fixtures shall not be greater than 30 feet (762 cm).

4.4.3. In a building containing one or two dwelling units, every public hall, exterior entry door, and stairway shall be illuminated by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area that is controlled by a three-way switch or a motion-activated device.

 Stretch Provisions:

- Polychlorinated-biphenyl (PCB)-containing lighting ballasts (e.g., older pre-1978 T-12 lighting ballasts) shall be removed, replaced with lighting fixtures that do not contain PCBs, and disposed of in accordance with applicable state and federal regulations.
- The lighting fixtures in public halls, stairways, and entries shall provide 1600 lumens for every 200 ft² (18.6 m²) of floor area.
- The parking areas and walkways of multifamily housing shall be illuminated by outdoor lighting devices suitable for the premises.

5. THERMAL COMFORT, VENTILATION, AND ENERGY EFFICIENCY

5.1. Heating, Ventilation, and Air Conditioning Systems.

Facilities for heating, cooling, ventilation, and humidity control shall be maintained in good working condition and operated when necessary for the health and comfort of the occupants and in accordance with the design capacity of the installed equipment. Within 48 hours after equipment has become inoperative due to a mechanical problem or power failure other than a utility outage, an alternative safe source of necessary heating, ventilating, or cooling shall be provided.

5.2. Heating System.

Except in Climate Zone 1, every dwelling shall have a properly installed heating system in good and safe working condition that is capable of safely and adequately heating all habitable rooms, bathrooms, and toilet rooms. The heating system, filtration components, distribution components, heating elements, and cooling elements (if provided), shall be sealed, cleaned, maintained, and operated in accordance with manufacturer specifications and shall be inspected and serviced annually by a licensed heating, ventilation, and air conditioning systems contractor.

5.2.1. Venting and Air Supply for Heating Equipment. Furnaces, water heaters, wood stoves, and other devices that employ combustion-burning fuel shall be vented to the outside of the structure in an approved manner that meets manufacturer specifications and is in compliance with applicable codes and standards (e.g., ANSI 223.1/NFPA 54 National Fuel Gas Code, NFPA 31 Standard for the Installation of Oil-Burning Equipment, NFPA 211 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances) and shall be supplied with sufficient air to support the continuous complete combustion of fuel and prevent backdrafting.

5.2.2. Minimum Heat Temperature. The heating system shall be capable of maintaining a minimum room temperature of 68° F (20° C) in every habitable room, bathroom, and toilet room.

5.2.3. Heating Supply. If the dwelling unit is rented, leased, or let on terms either expressed or implied that heat will be supplied, heat shall be provided to maintain a minimum temperature of 68° F (20° C) in habitable rooms, bathrooms, and toilet rooms; and at no time during the heating season shall the system allow the temperature to exceed 78° F (25° C) in any room.

5.2.4. Forced-Air Systems. Any dwelling with a forced-air system shall have at least one thermostat within each dwelling unit capable of controlling the heating system, and cooling system if provided, to maintain temperature set point between 55° F (13° C) and 85° F (29° C) at different times of the day. The system shall have a clean air filter installed in accordance with manufacturer specifications at each change in tenancy and at least annually. This filter shall have a minimum efficiency reporting value of eight (MERV-8) unless the system is not equipped to use a MERV-8 filter.

5.2.5. Steam and Hot Water Systems. In dwellings with heating equipment utilizing steam or hot water with a temperature of 110° F (43° C) or greater, protective covers/barriers shall be installed on and maintained for exposed surfaces of baseboard units, radiators, and piping between radiators.

5.2.6. Wood Stoves. A wood stove manufactured after June, 1988 shall have a manufacturer's label certifying compliance with the emission standard at 40 C.F.R. § 60 part AAA. Clearance of 30 inches (76 cm) shall be maintained between combustible materials and a stove with no heat shield. Where a heat shield is present, the clearance between combustible materials and the stove shall be compliant with manufacturer specification for the heat shield.

✓ Stretch Provisions:

- Any new combustion heating equipment installed in occupied or conditioned spaces shall be power-vented or sealed (direct-vented) combustion equipment.
- The heating system shall be controlled by a programmable thermostat to avoid temperature extremes.

- The dwelling shall have provisions to maintain the indoor temperature below a maximum of 85° F (29° C) through the use of mechanical air conditioning, ventilation systems, or passive design features.
- Air filters shall be replaced at least every three months.

5.3. Ventilation.

Natural or mechanical ventilation, or a combination of the two, shall deliver fresh air to every habitable room and bathroom and be capable of removing moisture-laden air and other contaminants generated during cooking, bathing, and showering.

5.3.1. Every dwelling shall have a ventilation system compliant with ASHRAE Standard 62.2 (Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings) or ASHRAE 62.1 (Ventilation for Acceptable Indoor Air Quality) as applicable to the dwelling.

5.3.2. The air exhausted from a bathroom, toilet room, kitchen, clothes dryer, or basement shall not be vented into any other parts of the building's habitable space or an attic; such air shall discharge directly to the outdoors but not near any intake on the building exterior.

5.3.2.1. The exhaust vent from a clothes dryer shall consist of a rigid or corrugated semi-rigid metal duct.

5.3.3. Pipes, ducts, conductors, fans, and blowers shall not discharge gases, steam, vapor, hot air, grease, smoke, odors, or other gaseous or particulate wastes directly upon abutting or adjacent public or private property or that of another occupant. Vent pipe openings and any pest-proofing screens that cover them shall be maintained free of debris.

5.3.4. Basement air shall not be used as supply air for an air handling system.

Stretch Provision:

- HVAC equipment shall have the capacity to maintain indoor relative humidity (RH) at or below 60 percent.

5.4. Air Sealing.

Openings into dwellings and dwelling units shall be sealed to limit uncontrolled air movement.

5.4.1. Exterior doors, windows and skylights, openings where siding and chimneys meet, utility penetrations, electrical outlets, and other openings shall be weathertight.

5.4.1.1. Pads, door sweeps, weather stripping, and seals shall be used and maintained to minimize air leaks.

5.4.2. Openings separating an attached garage from a habitable room, including doors, ceilings, floors, and utility and ductwork penetrations, shall be sealed.

5.4.2.1. Any doorway between a habitable room and a garage shall be equipped with a wood door not less than 1 $\frac{3}{8}$ inches (35 mm) in thickness, a solid or honeycomb core steel door not less than 1 $\frac{3}{8}$ inches (35 mm) thick, or a 20-minute fire-rated door. The door shall have an automatic closing mechanism and be sealed with weather stripping.

5.4.2.2. There shall be no door, window, or other opening from a garage into a room used for sleeping purposes.

5.4.3. Heating and air conditioning system ductwork and air handling units located in an attached garage shall be correctly insulated and sealed.

5.4.3.1. There shall be no supply or return vent openings in a garage that connect to air handlers serving habitable spaces.

5.4.4. In a multifamily building, walls, ceilings, and floors that separate a dwelling unit from neighboring units, corridors, chases, stairwells, and other openings shall be sealed.

✔ **Stretch Provision:**

- Air handling equipment and associated ductwork shall be relocated from a garage to an area within the conditioned space.

6. MOISTURE CONTROL, SOLID WASTE, AND PEST MANAGEMENT

6.1. Moisture Prevention and Control.

Every foundation, roof, roofing component, exterior wall, door, skylight, and window shall be watertight, weathertight, free of persistent dampness or moisture, and in good condition.

6.1.1. The building's drainage system, such as footing or foundation drains, gutters, downspouts, rainwater collection containers, or other elements, shall direct water away from the structure.

6.1.2. Exterior wood surfaces shall be protected from the elements and decay by paint or other protective treatment. Weep holes in brickwork shall be left open.

6.1.3. Premises shall be graded and maintained to prevent the erosion of soil and to prevent the accumulation of water on the premises, within a crawlspace, or within the structure.

6.1.4. Interior and exterior surfaces and surface coverings, such as but not limited to carpet, wood, cellulose insulation, and paper, paint, and other wall coverings, including paper-faced gypsum board, shall have no signs of visible mold growth or chronic or persistent excessive dampness or moisture.

6.1.5. Building material that is discolored or deteriorated by mold or mildew or causes a moldy or earthy odor shall be cleaned, dried, and repaired. Structurally unsound material shall be removed and replaced.

6.1.5.1. Removal and repair of moldy material shall be conducted in accordance with New York City's Guidelines on Assessment and Remediation of Fungi in Indoor Environments, the Institute of Inspection, Cleaning, and Restoration Certification's IICRC S520 Standard and Reference Guide for Professional Mold Remediation, or the EPA guidelines for Mold Remediation in Schools and Commercial Buildings.

6.1.6. The underlying cause of excessive dampness or moisture, or moldy or earthy odor shall be investigated and corrected.

6.1.7. Cold HVAC and plumbing components and systems (e.g., chilled-water pipes and valves, refrigerant piping, and valves) in readily accessible locations shall be sufficiently and continuously insulated to keep the temperature of their surfaces at least 10° F (4° C) above the dew point of the surrounding air.

6.1.8. Unless the crawl space is sealed and insulated from the outdoors, the crawl space shall be free of high-moisture conditions or be separated from the dwelling by an air seal or other method suitable to the climate and conditions.

✓ **Stretch Provisions:**

- Exterior weather-resistant barrier systems shall be used to reduce potential for water leaks and moisture intrusion.
- Water/mold-resistant materials shall be used on bathroom walls and floors, showers, and other areas of the home that are likely to be exposed to moisture.
- In warm-humid and mixed-humid climates:
 - Exterior wall insulations shall not include a vapor barrier/retarder material on the interior side (such as plastic sheeting or foil facing), with the exception of closed-cell foam insulation (spray or rigid), kraft-faced insulation, and seasonally adjusting membranes.
 - There shall be no vinyl wallpaper or other impermeable interior finish on the interior surface of exterior walls within an air-conditioned dwelling.
 - Exterior drainable rigid insulation systems shall be used to reduce wall assembly condensation risk.
- The building and its systems shall meet the following moisture management criteria:
 - When the building is being mechanically cooled, ventilation air shall be dried to a dew point value below the building's dew point.
 - Condensation inside HVAC components and air distribution ductwork shall be drained to an appropriate sanitary drain or condensate collection system.

- Indoor surfaces of both occupied and unoccupied spaces shall not be cooled to temperatures so low as to create an average surface relative humidity (RH) of over 80 percent that lasts for more than 30 days on visible surfaces in occupied spaces and surfaces inside building cavities and unconditioned space.
- Indoor dew point shall be low enough to ensure no condensation occurs on the exposed surfaces of cool HVAC components or on building materials or furnishings.
- Humidifiers shall be sized, installed, and controlled so they do not overload the air with humidity, which increases the risk of condensation inside air distribution systems and exterior walls and roofing assemblies.

6.2. Solid Waste.

Every dwelling shall have adequate facilities for temporary storage of trash and recyclable materials.

6.2.1. There shall be trash containers outside the dwelling for the storage of trash awaiting collection or disposal. The total capacity of these facilities shall be sufficient to store occupants' trash between scheduled collection times, and shall be placed on a cleanable surface constructed to minimize spillage.

6.2.2. There shall be containers outside the dwelling for recyclable materials awaiting collection, with capacity sufficient to store occupants' recyclable materials between scheduled collection times.

✓ Stretch Provision:

- Exterior trash and recycling containers shall be placed at least 30 feet (nine meters) from the building, unless such space is not available.

6.3. Pest Management.

Integrated pest management (IPM) methods shall be used to maintain every dwelling free of infestation, openings that allow pest entry, conditions that harbor pests or provide them with food or water, and visible pest residue or debris.

6.3.1. A pest management professional who has an IPM certification or a person trained in IPM shall develop the IPM program for a multifamily building.

6.3.2. Every dwelling, premise, accessory structure, and fence shall be maintained in good repair, free of pest infestation, and inspected for pests and building conditions that attract and support pests.

6.3.2.1. There shall be no accumulation of trash, paper, boxes, lumber, scrap metal, food, or other materials that support rodent harborage in or about any dwelling or premises. Stored materials shall be placed in boxes or stacked in stable piles elevated at least six inches (152 mm) above the ground or floor and at least six inches (152 mm) from the walls. Stored materials shall not block any egress routes.

6.3.2.2. There shall be no trees, shrubs, or other plantings in the soil within six inches (152 mm) of any dwelling.

6.3.2.3. There shall be no accumulation of water in or about any dwelling or premises.

6.3.3. Every openable window and storm door shall be supplied with adequate screens to prevent the entry of pests.

6.3.4. There shall be no holes or open joints in exterior walls, foundations, slabs, floors, or roofs that equal or exceed one-eighth inch (3 mm).

6.3.4.1. The areas surrounding windows, doors, pipes, drains, wires, conduits, vents, and other openings that penetrate exterior walls shall be sealed with low-VOC caulk or closed-cell insulation.

6.3.5. Pest infestation and the underlying cause shall be eliminated using control methods consistent with IPM, such as exclusion, sanitation, and least-risk pesticides scaled to and designed for the targeted infestation.

6.3.5.1. Foggers and organic phosphates shall not be used to control or eliminate pests.

7. CHEMICAL AND RADIOLOGICAL AGENTS

7.1. General Requirements.

All chemical and radiological agents in dwellings, premises, and accessory structures, including but not limited to deteriorated lead-based paint, friable asbestos-containing material, formaldehyde, volatile organic compounds, radon, pesticides, and methamphetamine, shall be contained, stored, removed, or mitigated in a safe and healthy manner consistent with federal, state, and local laws and regulations. When an applicable regulatory limit is more protective than the level included in this section, the more restrictive limit shall apply.

7.2. Lead-Based Paint.

7.2.1. Lead levels at or above federal regulatory limits pursuant to 40 C.F.R. § 745.65 are deemed hazardous: (1) lead-based paint on an existing painted surface—0.5 percent by weight or 1.0 milligrams per square centimeter; (2) dust on floors—40 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—250 $\mu\text{g}/\text{ft}^2$; (4) dust on window troughs (wells)—400 $\mu\text{g}/\text{ft}^2$; (5) bare soil in children's play areas—400 parts per million (ppm) of lead; and (6) bare soil in areas of the yard that are not children's play areas—1,200 ppm.

7.2.2. Painted surfaces shall be maintained intact. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), deteriorated paint at a property built before 1978 shall be repaired in accordance with the renovation requirements of 40 C.F.R. § 745 Subpart E, and the underlying cause of the deterioration shall be corrected.

7.2.3. All renovation, repair, and painting work that disturbs a painted surface in a pre-1978 dwelling shall be performed in accordance with the renovation requirements of 40 C.F.R. § 745, Subpart E, unless the paint has been tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a). Dust clearance testing shall be performed at the conclusion of renovation work.

7.2.4. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), a painted surface shall not be disturbed using methods that involve (1) open-flame burning or torching or operating a heat gun at temperatures above a maximum of 1,100° F (593° C); or (2) power sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting unless such machines have shrouds or containment systems and a High-Efficiency Particulate Air (HEPA) vacuum attachment that collects dust and debris at the point of generation. The shroud or containment system shall release no visible dust or air outside the shroud or containment system.

7.2.5. Lead-based paint shall not be applied to the interior or exterior surface of any dwelling or dwelling unit.

Stretch Provision:

- Lead present at or above the following limits is deemed hazardous: (1) lead-based paint on a friction, impact, or chewable surface, damaged or otherwise deteriorated, or non-intact—0.06 percent by weight; (2) dust on floors—10 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—100 $\mu\text{g}/\text{ft}^2$; and (4) 40 $\mu\text{g}/\text{ft}^2$ on porches.

7.3. Asbestos.

Every owner shall maintain in good repair all asbestos-containing material on the premises. All asbestos-containing material shall be maintained non-friable and free from any defects such as holes, cracks, tears, and/or looseness that may allow the release of fibers into the environment.

7.3.1. Friable asbestos-containing material shall be abated by licensed asbestos professionals in accordance with federal, state, or local requirements.

7.3.2. Any renovation, demolition, or other activity that will disturb asbestos-containing materials shall be preceded by asbestos abatement performed by certified asbestos professionals in accordance with federal, state, or local requirements.

7.3.3. Abatement, removal, and disposal of all asbestos-containing material shall comply with all appropriate federal, state, and local requirements.

7.4. Toxic Substances in Manufactured Building Materials.

7.4.1. Building materials consisting of hardwood plywood, medium-density fiberboard, and particleboard as defined by 15 U.S.C. 2697(b)(2) shall not be used in maintenance and renovations within dwellings, unless the materials have been certified to meet the formaldehyde emission standards of 15 U.S.C. 2697(b)(2):

- (1) Hardwood plywood with a veneer core, 0.05 parts per million (ppm);
- (2) Hardwood plywood with a composite core, 0.05 ppm;
- (3) Medium-density fiberboard, 0.11 ppm;
- (4) Thin medium-density fiberboard, 0.13 ppm; and
- (5) Particleboard, 0.09 ppm.

7.4.2. Building materials used in maintenance and renovations, including but not limited to paints, coatings, primers, glues, resins, adhesives, and floor coverings, shall be certified as having no volatile organic chemicals (VOCs) or low VOC emissions, and having no halogenated flame retardants (HFRs).

7.5. Radon.

Radon present at levels at or above the EPA action level of four picocuries radon per liter of air (pCi/L) in the lowest habitable level of the dwelling shall be deemed hazardous. Radon levels shall be determined by an approved testing method in accordance with state and local requirements. Radon levels exceeding four pCi/L shall be mitigated by a qualified radon mitigation professional who meets state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

✓ **Stretch Provision:**

- Radon present at levels at or above two pCi/L in the lowest habitable level of the dwelling shall be deemed hazardous. Radon determined by an approved testing method to exceed two pCi/L shall be mitigated by qualified radon mitigation professionals in accordance with state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

7.6. Pesticides.

Pesticides shall only be used in accordance with IPM methods discussed in Section 6.3, using the least toxic pesticide with demonstrated efficacy for the identified pest.

7.6.1. Pesticides shall be applied only in areas and at concentrations which comply with manufacturer specifications. When it is determined by an approved method that a hazardous amount of a pesticide has been applied in a location or at a concentration contrary to manufacturer specifications, the hazard shall be immediately mitigated.

7.6.2. Pesticides shall be stored and disposed in accordance with manufacturer specifications.

7.7. Methamphetamine.

A dwelling that has been used for methamphetamine manufacture shall be vacated until certified by an approved testing method as safe from hazardous materials related to the methamphetamine manufacturing process.

7.8. Smoke in Multifamily Housing.

7.8.1. Smoking shall be prohibited in all indoor common areas of multifamily buildings.

7.8.2. Smoking shall be prohibited in exterior areas less than 25 feet (762 cm) from building entrances, outdoor air intakes, and operable windows.

7.8.3. Tenants and prospective tenants shall be informed in writing of any applicable smoke-free policy and the location of designated smoke-free and smoking areas. Signs shall be posted in all designated areas.

7.8.4. Tenants who terminate a lease early due to incursion of tobacco smoke or the inception of a smoke-free policy shall be exempt from early termination penalties or security deposit forfeiture.

✓ **Stretch Provisions:**

- A property-wide policy shall be established in consultation with current tenants to designate exterior common areas where smoking shall be prohibited and areas where smoking shall be permitted.
- A property-wide policy shall be established in consultation with current tenants to designate dwelling units where tobacco smoking shall be prohibited.

Definitions

Accessory structure shall mean a detached structure, such as garage or shed, that is subordinate to the principal building(s) on the same premises.

Adequate shall mean sufficient to accomplish the purpose intended without unreasonable risk to human health or safety.

Approved shall mean established by the local or state authority having such administrative authority or determined by the designated official.

Asbestos shall mean chrysotile, amosite, crocidolite; or, in fibrous form, tremolite asbestos, anthophyllite asbestos, or actinolite asbestos.

Asbestos-containing material shall mean any material or product containing more than one percent asbestos.

Backdrafting shall mean improper venting of combustion appliances that causes combustion by-products or other gases to enter the indoor environment rather than to exhaust outdoors.

Balusters shall mean pillars or columns in a series supporting a rail or guard.

Basement shall mean a portion of a building located partly or entirely below grade.

Biological agent shall mean but not be limited to mold, infestation, human and animal waste, wastewater, sewage, rotting material, and accumulation of trash that may harbor viruses, parasites, fungi, and/or bacteria.

Bulk storage container shall mean a metal trash container that is more than 40 inches (102 cm) in height, has a capacity of more than two cubic yards (1.5 m³), and is equipped with fittings for hydraulic and/or mechanical emptying, unloading, and/or removal.

Carbon monoxide alarm shall mean an electronic device that measures the level of carbon monoxide gas in the air and is equipped with a sensor that activates an audible alarm when an amount of carbon monoxide above the device's threshold level accumulates in the area in which the alarm is located.

Chemical agent shall mean chemicals that have the potential to cause adverse health effects.

Chimney shall mean a vertical masonry shaft of reinforced concrete or other approved noncombustible, heat-resisting material enclosing one or more flues, to remove products of combustion from solid, liquid, or gaseous fuel.

Class ABC fire extinguisher shall mean a fire extinguisher capable of putting out (1) fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics (Class A); (2) fires in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases (Class B); and (3) fires that involve energized electrical equipment (Class C).

Cleanable shall mean moisture-resistant, free from cracks, pitting, chips, or tears, and designed to be cleaned frequently.

Climate Zone 1 shall mean the geographic region designated by the International Energy Conservation Code that receives each year at least 5,000 cooling degree days, which are calculated by multiplying temperature differences above 50 degrees Fahrenheit by the amount of time such higher temperatures are reached.

Common areas shall mean areas within multifamily housing that are designated for use by all occupants, owners, tenants, or users of a building or building complex, including but not limited to corridors, hallways, lobbies, parking areas, laundry rooms, recreational spaces, pools, and exterior property.

Dwelling shall mean any building wholly or partly used or intended to be used for living, sleeping, cooking, and eating.

Dwelling unit shall mean a room or group of rooms used or intended to be used for living, sleeping, cooking, and eating by one or more individuals living together as a single household.

Egress shall mean the path available for a person to leave a building. This route shall be unobstructed, and doors along this route cannot be subject to locking from the side to which people will be leaving.

Electrical system shall mean a system that makes electricity available in a building and distributes it through outlets and lighting fixtures for occupant use.

Emergency escape and rescue opening shall mean an operable window, door, or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

Flue shall mean a conduit made of non-combustible heat-resisting material that is used to remove the products of combustion from solid, liquid, or gaseous fuel.

Formaldehyde shall mean the colorless, flammable carcinogenic chemical, an organic compound with the formula HCHO, which is used in the manufacture of building materials (e.g., pressed wood products) and household products. Federal limits for formaldehyde emissions from building materials (hardwood plywood, medium-density fiberboard, and particleboard) were established in 15 U.S.C. 2697(b) (2).

Friable shall mean asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Grade shall mean the finished ground level adjoining building at all exterior walls.

Graywater system shall mean a system for collecting household waste water from plumbing fixtures other than toilets and treating it for non-potable reuse.

Guard shall mean a building component or a system of building components located near the open sides of elevated walking surfaces or adjacent to a window that minimizes the possibility of a fall from the walking surface or window to the lower level.

Habitable room shall mean an enclosed floor space used or intended to be used for living, sleeping, cooking, or eating, and excluding bathrooms, toilet rooms, laundries, furnace rooms, pantries, kitchenettes, utility rooms, foyers, communicating corridors, stairways, closets, storage spaces, workshops, or rooms with less than 70 ft² (6.5 m²) of floor space.

Handrail shall mean a horizontal or sloping rail intended for grasping by the hand for guidance or support.

Harborage shall mean any conditions or place where pests can obtain water or food, nest, or obtain shelter.

Healthy: See “safe and healthy.”

Heating system shall mean facilities that, for the purpose of maintaining thermal comfort during cold weather, heat air or water through a furnace or heat pump and distribute such heat through vents, ducts, pipes, or radiators, or hardwired electrical heaters. Neither a cooking appliance nor a portable, unvented fuel-burning space heater is a heating system.

Infestation shall mean the recurrent presence of any life stages of a pest that presents a hazard to humans, property, or the environment.

Insects shall mean all species of classes of Arachnida and Insecta (Hexapoda) of the phylum Arthropoda and includes but is not limited to flies, mosquitoes, bed bugs, crickets, cockroaches, moths, bees, wasps, hornets, fleas, lice, beetles, weevils, gnats, ants, termites, mites, ticks, spiders, and scorpions.

Integrated pest management shall mean a systematic strategy for managing pests that consists of prevention, exclusion, monitoring, and suppression of pests. Where chemical pesticides are necessary, a preference is given to materials and methods that maximize safety and reduce environmental health risk. Methods to manage pests include eliminating their harborage places; removing or making inaccessible their food and water sources; routine inspection and monitoring; identification of evidence found; treatment that is scaled to and designed for the infestation; using the least-toxic pesticide for the identified pest; and follow-up inspection until the infestation is gone. Low-toxicity pesticide products are labeled with the signal word of CAUTION while WARNING, DANGER, and POISON indicate higher levels of toxins.

L_{dn} (day-night equivalent sound level) shall mean a weighted average sound level measured over a 24-hour period with adjustments anticipating reduced levels during evening and night hours to factor occupants’ extra sensitivity to noise during those time periods.

LA_{eq} shall mean an average sound level measured over a specified period.

Lead-based paint shall mean equal to or greater than 1.0 milligram lead per square centimeter or 0.5 percent lead by weight for existing surfaces, paint, or other surface coatings, and equal to or greater than 90 parts per million (ppm) or .009 percent lead for paint and other surface coatings at the point of purchase.

Lead-based paint hazard shall mean any deteriorated lead-based paint, dust-lead hazard, soil-lead hazard, lead-based paint present on chewable surfaces with teeth marks, or lead-based paint present on friction surfaces, in accordance with 40 C.F.R. § 745.65.

Let shall mean to lease or grant the use and possession of real property whether or not for compensation.

Long-lasting battery shall mean a battery having a life of ten or more years.

Methamphetamine shall mean the synthetic drug with more rapid and lasting effects than amphetamine, sometimes used or manufactured illegally as a stimulant.

Mixed-humid climate shall mean a region that receives more than 20 inches (50 cm) of annual precipitation, has approximately 5,400 heating degree days (65° F or 18° C basis) or fewer, and where the average monthly outdoor temperature drops below 45° F (7° C) during the winter months. The U.S. counties located in a warm-humid climate are identified by Building America.

Mold shall mean a growth that a fungus produces on damp or decaying organic matter or on living organisms.

Multifamily housing shall mean any dwelling containing more than two dwelling units.

Occupant shall mean any individual living, sleeping, cooking, or eating in and having possession of a dwelling or dwelling unit.

Owner shall mean any person who alone, jointly, or severally with others, has legal title to the premises, dwelling, or dwelling unit, with or without accompanying actual possession thereof; has charge, care, or control of any premises, dwelling, or dwelling unit, as owner, agent of the owner, or other person; is executor, administrator, trustee, or guardian of the estate of the owner; is a mortgagee in possession; or is the senior officer or trustee of the association of unit owners of a condominium.

Person shall mean any individual, firm, corporation and its officers, association, partnership, cooperative, trustee, executor of an estate, governmental agency, or any other legal entity recognized by law.

Pesticide shall mean any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant.

Pests shall mean insects, rodents, or other vermin.

Plumbing shall mean and include any and all of the following facilities and equipment: water pipes, garbage disposal units, waste pipes, toilets, sinks, bathtubs, shower baths, catch basins, drains, vents, installed clothes washing machines and dishwashers, and any other supplied plumbing fixtures, together with all connections to water, sewer, or gas lines.

Potable water shall mean water that complies with the maximum contaminant limits of the United States Environmental Protection Agency (EPA) or a regulatory limit that is more protective than EPA's.

Premises shall mean a lot or parcel of land or plot of land, either occupied or unoccupied by any dwelling, and includes any such building, accessory structure, or other structure thereon.

Privacy shall mean the existence of conditions that permit an individual or individuals to be without observation, interruption, or interference by unwanted individuals.

Properly connected shall mean installed in accordance with all applicable codes and ordinances, and in good working order and not constituting a hazard to life or health.

Radon shall mean the odorless, tasteless, and invisible gas found in both outdoor air and indoor air that is a form of ionizing radiation produced by the decay of uranium in soil and water.

Recyclable materials shall mean disposable products composed of glass, metal, paper, plastic, and similar content that can be processed to produce a new supply of the same material or be reused in the production of other materials.

Riser shall mean the vertical surface that connects one tread of a step or stair to the next.

Rodent shall mean any member of the order Rodentia, including but not limited to field and wood mice, woodrats, squirrels, woodchucks, gophers, Norway rats (*Rattus norvegicus*), roof rats (*Rattus rattus*), and house mice (*Mus musculus*).

Safe and healthy shall mean the condition of being free from danger and chemical, biological, and physical agents that may cause injury, disease, or death; and fit for human occupancy.

Smoke shall mean emissions from a lighted pipe, cigar, cigarette, hookah, weed, herbs, or any other lighted biomass-burning substances such as but not limited to tobacco, marijuana, and incense.

Smoke detector shall mean a device that is equipped to activate an audible alarm when it detects the presence of combustion products in air.

Space heater shall mean a self-contained convection or radiant heater designed to heat a room, two adjoining rooms, or some other limited space or area.

Supplied shall mean paid for, furnished by, provided by, or under the control of the owner or operator.

Toilet room shall mean a room containing a water closet or urinal but not necessarily a bathtub or shower.

Trash shall mean garbage, refuse, or ashes.

Trash container shall mean a container with a tight-fitting lid that is constructed of metal or other durable material that is impervious to rodents, insects, and handling stress; and is capable of being filled, emptied, and cleaned without creating unsanitary conditions.

Tread shall mean the horizontal surface of a step or stair.

Unblockable drain shall mean a pool, spa, or whirlpool drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard.

Ventilation system shall mean the natural or mechanical process of supplying or removing conditioned or unconditioned air to or from a space.

Volatile organic compounds, or VOCs, shall mean organic chemical compounds whose composition makes it possible for them to evaporate under normal indoor atmospheric conditions of temperature and pressure.

Walk-off mat shall mean a coarse-ribbed or plush-surfaced mat with nonslip backing placed inside or just outside building entrances designed to capture dirt, water, and other materials tracked inside by people and equipment.

Warm-humid climate shall mean the region where either of the following conditions occurs: (1) 67° F (19.4° C) or higher wet bulb temperature for 3,000 or more hours during the warmest six consecutive months of the year; or (2) 73° F (22.8° C) or higher wet bulb temperature for 1,500 or more hours during

the warmest six consecutive months of the year. The U.S. counties located in a warm-humid climate are identified in Figure 301.1 and Table 301.1 of the 2012 International Energy Conservation Code.

Waterproof shall mean impervious to water.

Watertight shall mean closely sealed, fastened, or fitted so that no water enters or passes through the surface.

Weathertight shall mean secure against penetration by air, wind, rain, snow, and other weather conditions.

Interpretation of Terms:

Where the words "dwelling," "dwelling unit," "premises," and "structure," or a particular building component are used in this Standard, they shall be construed as if they were followed by the words "or any part thereof." Words used in the singular include the plural, and the plural the singular.

Annotated Standard: Requirements and Stretch Provisions with Rationales, References, and Resources

1. DUTIES OF OWNERS AND OCCUPANTS

1.1. Duties of Owners.

The owner has the duty to ensure that the structure, dwelling, dwelling unit, common areas, and premises are maintained in a safe and healthy condition, in compliance with this Standard and other applicable requirements.

1.1.1. The owner shall ensure the collection of trash and recyclables and provide and maintain trash containers, bulk storage containers, recycling containers, and areas where the containers are stored.

1.1.2. The owner shall maintain the building and premises to keep pests from entering the building and dwelling units, inspect and monitor for pests, and eliminate pest infestation in accordance with integrated pest management methods.

1.1.3. The owner shall provide occupants with at least 48 hours written notice of the planned use of a chemical agent such as a pesticide or herbicide, the date and location of application, and a copy of the warning label.

1.1.4. The owner shall not cause or allow any water, sewage, electrical, or gas service, facility, or equipment required for safe and healthy occupancy to be removed, shut off, or discontinued for any occupied dwelling, except for such temporary interruption as may be necessary while repairs or alterations are being performed, or during temporary emergencies requiring discontinuance of service. This provision does not apply where the occupant has contractual control over the service and shall not be interpreted as preventing a utility company from discontinuing service for reasons allowed by law.

1.1.5. The owner shall investigate occupant reports of unsafe or unhealthy conditions, respond in writing, and make needed repairs in a timely manner.

1.2. Duties of Occupants.

The occupant shall properly use and operate the dwelling unit and owner-supplied fixtures and facilities controlled by the occupant in order to maintain a safe and healthy environment within the dwelling unit, and report unsafe or unhealthy conditions, including breakdowns, leaks, and other problems requiring repair to the owner in a timely manner.

1.2.1. The occupant shall place trash and recyclables in the appropriate containers.

1.2.2. The occupant shall work with the owner to ensure pest-free conditions in accordance with integrated pest management.

1.2.3. If the occupant's action leads to pooling of water or another excessive moisture problem inside the dwelling unit, the occupant shall clean up and dry out the area in a timely manner.

2. STRUCTURE, FACILITIES, PLUMBING, AND SPACE REQUIREMENTS

2.1. Structure.

Requirement:

Every foundation, roof, floor, exterior and interior wall, ceiling, inside and outside stair, porch, trim, accessory structure, fence, door, window, and window glass shall be safe to use and capable of supporting the intended design loads and load effects and shall be in good condition.

Rationale:

The structure of a dwelling is complex. Its different parts must all be adequately designed and properly maintained to ensure that the habitable space is safe and healthy. The structure of a dwelling is dependent on foundation and footing, vapor barriers, house framing, roof framing, roofs, exterior walls, and trim components that are maintained in good condition. Poor construction of the structure can result in several negative consequences, including dampness or condensation; poor energy efficiency; excessive noise; structural damage, such as cracks in walls, open joints, and loose roofs, which allows pest intrusion; and collapse of building components, such as fixtures, flooring, lighting and cabinets, which can lead to poor health, injuries, or even death. Structural deficiencies in a dwelling can cause falls, fires, burns and scalds, carbon monoxide and other poisoning, drowning, and other injuries.

References:

- Jacobs, D. E. & Baeder, A. (2009). Housing interventions and health: A review of the evidence. Columbia, MD: National Center for Healthy Housing. Retrieved from <http://www.nchh.org/LinkClick.aspx?fileticket=2lvaEDNBldU%3d&tabid=229>
- U.S. Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. (2006). Healthy housing reference manual. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

2.2. Facilities.

Requirement:

Every plumbing fixture and pipe, chimney, flue, smoke pipe, and every other facility, piece of equipment, or utility shall be installed in conformance with applicable statutes, ordinances, and regulations.

2.2.1. Mechanical, utility, and heating equipment shall be separated from habitable rooms. In multifamily buildings, equipment rooms shall be locked.

Rationale:

Housing facilities in disrepair are likely to cause health burdens as a result of plumbing leaks and chimney, flue, and smoke pipe malfunctions. Chimneys in poor condition can cause condensation buildup within the chimney, which can lead to deterioration and eventually chimney collapse. Additionally, carbon monoxide and other combustion-related hazards that leak through gaps and cracks can cause lasting damage to a resident's health. Fire outbreaks can also start in chimneys and lead to serious injuries or death.

References:

Chimney Safety Institute of America. (2013). Safe home heating—avoiding carbon monoxide hazards. http://www.csia.org/homeowner-resources/Avoiding_Carbon_Monoxide_Hazards.aspx

2.3. Plumbing System.

Requirement:

Every plumbing fixture, stack, vent, water, waste, and sewer pipe shall be properly installed, maintained in a safe and functional order, and kept free from obstructions, leaks, and defects.

2.3.1. An approved potable water supply system shall provide an adequate amount of running water under pressure to all fixtures simultaneously.

2.3.2. An adequate supply of heated running water under pressure shall be supplied to sinks, bathtubs, showers, and laundry facilities. Water heaters shall be set at a minimum temperature of 110° F (43° C). At bathtub faucets and shower heads, the maximum temperature shall be 120° F (49° C). Heated water shall be provided by either a tank-type or tankless water heater. A tank-type water heater shall have a temperature/pressure relief valve that discharges to a drip pan, storage tank, or the outside. The temperature of water discharged from a tankless water heater shall not exceed 140° F (60° C).

2.3.3. Every waste pipe shall be connected to a public sewer system, an approved private sewage disposal system, or the dwelling's graywater system. No toilet waste pipe shall be connected to a graywater system. The drainage system shall have a cleanout.

2.3.4. Faucet discharge points shall be located above the overflow rim of sinks, tubs, or other fixtures that collect water.

 Stretch Provisions:

- Bathtub and shower faucets shall have anti-scald devices, such as an automatic temperature control mixing valve, water temperature limiting device, or temperature-actuated flow reduction valve.
- Each dwelling unit in multifamily housing shall have a separate meter for water supplied to the unit.
- Multifamily housing with one or more central water heaters shall comply with ASHRAE Standard 188P to assess and manage the risks associated with Legionella in building water systems.
- A private water supply shall be tested annually to ensure that water does not have biological or chemical contaminants.
- If there is a suspected risk of excessive lead in drinking water supplied by a public water utility, the water shall be tested. The risk factors shall include, but are not limited to, presence of an occupant with a blood lead level of five micrograms per deciliter or more, pipes made of lead or leaded brass, test results indicating that the lead level in the public water supply exceeds federal limits, and plumbing repair work that has disturbed water supply components (such as faucets, valves, pipes, meters, pressure regulators, backflow preventers, lead-soldered joints, or service lines). If the lead level in the water sample exceeds 15 parts per billion, there shall be an investigation of the possible sources(s) to determine the appropriate course of action. If warranted, lead and brass-containing components shall be replaced.

Rationale:

Plumbing leaks may cause mold growth on building materials. People who are exposed to molds may experience nasal and eye irritation, respiratory and allergic diseases, and asthma exacerbation. Damp conditions may magnify levels of biological agents, such as dust mites, bacteria, and cockroaches. The containment of household sewage is instrumental in protecting the public from waterborne and vector-borne diseases. Water at 140° F (60° C) can result in a second-degree burn after three seconds and a third-degree burn after five seconds. The long-term effects of scalds can include disability, disfigurement, or psychological harm and repeated skin grafts. Exposure to hazards in drinking water must be averted to prevent lead poisoning, Legionella, and other diseases caused by waterborne biological and chemical agents.

References:

- American Society of Heating, Refrigerating, and Air-Conditioning Engineers. (2011). Standard 188P (draft): Prevention of Legionellosis associated with building water systems. Retrieved from <https://osr.ashrae.org/Public%20Review%20Draft%20Standards%20Lib/Std-188P-PPR2%20Final%206%2010%202011.pdf>
- Burge, H. A. (1990, November). Bioaerosols: Prevalence and health effects in the indoor environment. *Journal of Allergy and Clinical Immunology*, 86(5), 687-704. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/2229836>
- Institute of Medicine. (2004). *Damp indoor spaces and health*. Washington, DC: The National Academies Press. Available at <http://www.iom.edu/Reports/2004/Damp-Indoor-Spaces-and-Health.aspx>
- International Code Council. (2012). *International plumbing code*, §§ 424.3, 424.5.

- International Code Council. (2012). International property maintenance code. §§ 505.4, 504.4-6, 501.6.
- International Code Council. (2012). International residential code, §§ P2713, P 2708.3, P 3009.
- U.S. Centers for Disease Control and Prevention. (2013, August). Drinking water. Retrieved from <http://www.cdc.gov/healthywater/drinking/index.html>
- U.S. Environmental Protection Agency. (2009, May). National primary drinking water regulations. Retrieved from <http://water.epa.gov/drink/contaminants/index.cfm>
- U.S. Environmental Protection Agency. (2011, April). Problems with pinhole leaks in your copper water pipes. EPA Science Matters. Retrieved from <http://www.epa.gov/sciencematters/april2011/leaks.htm>
- World Health Organization. (2010). Technical and policy recommendations to reduce health risks due to dampness and mould. Copenhagen: World Health Organization Regional Office for Europe. Retrieved from http://www.euro.who.int/_data/assets/pdf_file/0015/121425/E92998.pdf

Resources:

- American Society of Sanitary Engineering International. (n.d.). www.asse-plumbing.org/standards
- Connecticut Department of Public Health. (2013). Private drinking water in Connecticut. Retrieved from http://www.ct.gov/dph/lib/dph/environmental_health/eoha/pdf/24_residential_drinking_water_well_testing.pdf

2.4. Kitchen.

Requirement:

Every dwelling unit shall have a kitchen equipped with the following:

2.4.1. A kitchen sink in good working condition that is properly connected to heated and unheated water supplies and waste pipes. Any provided dishwasher and components of the sink, including disposal and water filtration devices, shall be in good working condition and properly connected.

2.4.2. A counter for food preparation and cabinets and/or shelves sufficient to store occupants' food that does not require refrigeration and eating, drinking, and food preparation equipment. Cabinets shall have tight-fitting doors and no gaps between any surfaces. The counter, countertop edges, cabinets, and shelves shall be of sound construction and furnished with surfaces that are impervious to water, smooth, and cleanable.

2.4.3. A range for cooking food. The range shall be properly installed with all necessary connections for safe and efficient operation and shall be maintained in good working condition.

2.4.3.1. The range shall include an oven unless both a separate oven, other than a microwave oven, and a cooktop are provided. A hot plate is not an acceptable substitute for burners on a range or cooktop. The range or cooktop shall have a vertical clearance of not less than 30 inches (762 mm) from above its surface to unprotected combustible material. Reduced clearances are permitted in accordance with the listing and labeling of the range hood.

2.4.3.2. Ventilation for the range shall be provided in accordance with Subsection 5.3.

2.4.4. A refrigerator with a freezer. The refrigerator shall be in good working condition, of sufficient size to store occupants' food that requires refrigeration, and capable of maintaining a temperature less than 41° F (6° C) but more than 32° F (0° C). The freezer section shall be capable of maintaining a temperature below 0° F (-18° C).

2.4.4.1 If the lease does not provide for a refrigerator, adequate connections for the occupant's installation and operation of a refrigerator shall be provided.

2.4.5. A kitchen floor in good condition with a sealed, water-resistant, nonabsorbent, and cleanable surface.

✓ Stretch Provisions:

- Cabinets and countertops shall be constructed of materials that are rated No-Added Formaldehyde (NAF) or Ultra-Low-Emitting Formaldehyde Resins (ULEF).

- Wall surfaces immediately adjacent to the range, sink, and counter shall be covered with an impervious finish.
- The joints where a wall meets a cabinet or counter, and where a counter meets a stove or sink, shall be sealed or covered to permit thorough cleaning and deter pests.
- Enclosed cabinets (as opposed to a combination of shelves and cabinets) sufficient to store occupants' food that does not require refrigeration shall be provided.
- Freestanding stoves shall have brackets to prevent tip-over.

Rationale:

Properly designed kitchens enable the safe and hygienic preparation and cooking of food and reduce the risk of food poisoning. Damp, unmaintained surfaces may deteriorate, causing increased chance of growth of biological agents, presenting a risk of food contamination and food poisoning. Kitchen floors that are impervious to water and capable of being cleaned and maintained prevent the accumulation of dirt, moisture, and biological agents.

References:

- California Air Resources Board. (n.d.). No-added formaldehyde and ultra low emitting formaldehyde resins. http://www.arb.ca.gov/toxics/compwood/naf_ulef/naf_ulef.htm
- International Code Council. (2012). International residential code, § M1901.1.
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

2.5. Bathroom.

Requirement:

Every dwelling unit shall have a private bathroom equipped with the following:

2.5.1. A toilet in good working condition that is sealed to the waste pipe and affixed to the floor and properly connected to both the dwelling's water supply and a waste pipe leading to an approved sewage system or private waste disposal system.

2.5.2. A sink in good working condition, with a stable connection to the wall or secure attachment to the floor that is properly connected to the heated and unheated potable water supply and a sealed trap leading to a waste pipe.

2.5.3. A bathtub or shower in good working condition that is properly connected to the heated and unheated potable water supply and a waste pipe. The bottoms of bathtubs and shower floors shall have permanent or removable nonslip surfaces.

2.5.4. Cleanable nonabsorbent water-resistant material on floor surfaces and extending on bathroom walls at least 48 inches (122 cm) above a bathtub and 72 inches (183 cm) above the floor of a shower stall. Such materials on walls and floors shall form a watertight joint with each other and with the bathtub or shower.

2.5.5. Ventilation for the bathroom provided in accordance with Subsection 5.3.

 Stretch Provisions:

- Grab bars shall be firmly anchored to the wall adjacent to each bathtub, shower, and toilet in accordance with the Americans with Disabilities Act Design Guidelines.
- Tub and shower enclosures composed of tile or panel assemblies with caulked joints shall be installed over moisture-resistant backing material, such as cement board. Paper-faced wallboard shall not be used behind such tub and shower enclosures. Monolithic tub and shower enclosures (e.g., fiberglass with no seams) are exempt from these limitations unless required by the manufacturer.

Rationale:

Poorly maintained bathrooms can cause water damage, mold growth, and associated health issues. Exposure to bathroom-related biological agents can cause respiratory and gastrointestinal symptoms. People who are exposed

to molds may experience nasal and eye irritation, respiratory and allergic diseases, and asthma exacerbation. Structural deficiencies in the bathroom, such as the lack of grab bars and nonslip surfaces, may lead to falls, especially among young children and older adults. Children under the age of five years are most likely to fall in the bathroom, but older adults experience greater injuries. The most common injuries resulting from falls associated with a bath, shower, or similar facility are cuts or lacerations, swelling or bruising, or fractures. Outcomes from a bathroom fall are likely to be more severe than in other areas, because of the many hard projections and surfaces found in bathrooms and the fact that the user may be unprotected by clothing.

References:

- Cutbill, M. (1982). Analysis of accidents located in the bathroom. London, U.K.: Department of Trade and Industry. As cited in U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- DiGuseppi, C., Jacobs, D. E., Phelan, K. J., Mickalide, A. D., & Ormandy, D. (2010, September). Housing interventions and control of injury-related structural deficiencies: A review of the evidence. *Journal of Public Health Management Practice*, S32–S41.
- International Code Council. (2012). International building code, § 1210.2.
- NYC Mayor’s Office for People with Disabilities. (2010, September). Inclusive design guidelines. Available at: <http://shop.iccsafe.org/inclusive-design-guidelines-new-york-city-1.html>
- U.S. Department of Justice. (2010). Americans with Disabilities Act standards for accessible design. §609. Retrieved from <http://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm#Bars>
- World Health Organization. (2010). Technical and policy recommendations to reduce health risks due to dampness and mould. Copenhagen: World Health Organization Regional Office for Europe. Retrieved from http://www.euro.who.int/_data/assets/pdf_file/0015/121425/E92998.pdf
- World Health Organization. (2009). WHO guidelines for indoor air quality: Dampness and mould. Retrieved from http://www.euro.who.int/_data/assets/pdf_file/0017/43325/E92645.pdf

2.6. Minimum Space.

Requirement:

The dwelling shall provide privacy and adequate space for sleeping and living.

2.6.1. A bedroom shall not be the only passageway to the only bathroom in a dwelling unit with more than one bedroom.

2.6.2. A bathroom or toilet room shall not be the only passageway to any habitable room, hall, basement, or the exterior of the dwelling.

2.6.3. Every habitable room shall have a minimum floor area of 70 ft² (6.5 m²).

2.6.4. Every dwelling shall have closet space or other storage space to store occupants’ clothing and personal belongings.

2.6.5. The ceiling height of any habitable room shall be at least 84 inches (213 cm). In a habitable room with a sloping ceiling, at least one-half of the floor area shall have a ceiling height of at least 84 inches (213 cm). If any part of a room has a ceiling height lower than 60 inches (152 cm), its floor area shall not be considered when computing the floor area of the room.

2.6.6. A habitable room located partly or totally below grade shall be provided with natural light by windows in accordance with Subsection 4.3, and ventilation in accordance with Subsection 5.3. In such a room, the ceiling and any ducts, pipes, and other obstructions shall be at least 84 inches (213 cm) above the floor throughout the room, and walls and floors shall be waterproof and free of dampness.

Rationale:

Privacy is a necessity to people, to some degree and during some periods. There should be sufficient space to provide for social interaction between members of the household, while allowing for private time away from other household members. Personal space and privacy needs are important for the individual members of the same household as well as for individuals or households sharing rooms and/or facilities. Providing adequate enclosed floor space for living, sleeping, cooking, or eating and storage helps prevent clutter and provides privacy to promote healthy living. Pest harborage, psychological distress, and injury hazards may result from clutter. Where units with rooms meeting the minimum floor area requirement are unavailable or unaffordable, it may be necessary to deviate from minimum room size.

References:

- Housing Corporation and Care Service Improvement Partnership. (2006). Good housing and good health? Retrieved from http://www.healthimpactproject.org/resources/document/Good_housing_and_good_health.pdf
- International Code Council. (2012). International property maintenance code, §§ 404.4.3, 404.3.
- MidWestPlanService. (2006). The house handbook: Guidelines for building or remodeling your home. Ames, IA: Iowa State University.
- Office of the Deputy Prime Minister. (2004, May). The impact of overcrowding on health & education: A review of the evidence and literature. London: Office of the Deputy Prime Minister. Retrieved from <http://dera.ioe.ac.uk/5073/>
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

2.7. Floors and Floor Coverings.

Requirement:

Floors and floor coverings shall be attached at each threshold, maintained in safe and healthy condition, capable of being cleaned, and free of bulges and buckling. Carpets shall have no tears, folds, or bumps.

✓ Stretch Provisions:

- Floor coverings shall consist of low-pile carpet or nonabsorbent material such as hardwood, tile, or resilient flooring. Carpet and other floor coverings shall be certified as having low volatile organic compound (VOC) emissions, and any adhesives, padding, or other materials used in installing the floor covering shall be certified as having no VOCs or low VOC emissions, and having no perfluorocarbons or halogenated flame retardants.
- Walk-off entry mats shall be provided inside or outside each entryway that leads to the outdoors.

Rationale:

Worn carpet that is poorly maintained can pose slip, trip, and fall hazards. Carpet in poor condition may also be a source of chemical and biological agents that become lodged in the carpeting. Worn carpeting is difficult to vacuum adequately. Cleanable floors in good condition are less likely to accumulate dirt, moisture, and chemical and biological agents. Volatile organic compounds (VOCs) contribute significantly to unhealthy indoor air quality. VOC sources are not limited to the flooring itself, but also include glues, padding, and other materials used in installation. Perfluorocarbons (PFCs), which are linked to a range of developmental disorders and other adverse effects, were added to carpets for stain resistance until U.S. manufacturers voluntarily discontinued their use in 2006.

References:

- California Department of Public Health. (2010). Emission testing method for California specification 01350: Standard method for the testing and evaluation of volatile organic chemical emissions from indoor sources using environmental chamber. Retrieved from http://standards.nsf.org/apps/group_public/download.php/19152/CDPH%2001350%20V1-1.pdf
- Carpet and Rug Institute. (n.d.). Residential: Green label/green label plus. Retrieved from <http://www.carpet-rug.org/residentialcustomers/selecting-the-right-carpet-or-rug/green-label.cfm>

- Environmental Working Group. (2003). PFCs last forever. Retrieved from <http://www.ewg.org/research/pfcs-global-contaminants/pfcs-last-forever>
- Lewis, R. D., Breyse, P. N., Lees, P. S. J., Diener-West, M., Hamilton, R. G., & Eggleston, P. (1998, September). Factors affecting the retention of dust mite allergen on carpet. *American Industrial Hygiene Association Journal*, 59(9), 606–613. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/9778820>
- National Center for Healthy Housing. (2008). Carpets and healthy homes. Retrieved from <http://www.nchh.org/Portals/0/Contents/CarpetsHealthyHomes.pdf>
- Scientific Certification System. (n.d.). FloorScore®. Retrieved from <http://www.scsglobalservices.com/floorscore>
- U.S. Environmental Protection Agency. (2013, September). Significant new uses: Perfluoroalkyl sulfonates and long-chain perfluoroalkyl carboxylate chemical substances. Retrieved from <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPPT-2012-0268-0034>

2.8. Noise.

Requirement:

The structure and facilities shall be maintained so that the noise level in the interior of the dwelling unit caused by exterior sources is below 45 dB L_{dn} (day-night equivalent sound level).

✓ Stretch Provisions:

- Nighttime noise levels within bedrooms shall not exceed 30 dB LA_{eq} measured over eight hours.
- HVAC equipment, including intermittent ventilation fans, shall operate at a noise level that creates no more than 45 dB L_{dn} in habitable rooms.
- Wall and ceiling assemblies shall meet performance standards to attenuate exterior sound reaching occupants or be constructed using materials with sound-dampening acoustical properties.
- Roof material, chimney baffles, exterior doors, mail slots, attic ventilation ports, wall-mounted air conditioners, and other building components that have the potential to admit excessive noise shall be configured to minimize sound intrusion.
- Windows shall be sealed, made weathertight, and caulked to minimize sound intrusion when closed.

Rationale:

The World Health Organization (WHO) has identified and documented seven categories of adverse health effects of noise pollution on humans: hearing impairment, speech intelligibility, disturbances in sleep and cardiovascular function; mental health, negative social behavior and annoyance reactions, and impaired task performance. The negative health impacts of noise are related to the total noise exposure experienced from all noise sources in the environment and can lead to a combination of these different negative impacts. Additionally, noise exposure disproportionately impacts certain segments of the population. Infants, children, those with mental or physical illnesses, and the elderly are particularly vulnerable to noise pollution.

References:

- Berglund, B., Lindvall, T., & Schwela, D. (1999). *Guidelines for community noise*. Geneva: World Health Organization. Retrieved from who.int/docstore/peh/noise/guidelines2.html
- Hagler, L. (1999). Summary of adverse health effects of noise pollution. Retrieved from <http://www.noiseoff.org/document/who.summary.pdf>
- Harris, D. A. (1997). *Noise control manual for residential buildings*. New York, NY: McGraw-Hill Professional.
- State of California. (1974). Health and safety code. §17922.6, Noise insulation standards.

Resources:

- Standard for Maximum Interior Noise Level, 24 C.F.R. § 51.101(a)(9) (1998).
- U.S. Department of Housing and Urban Development. (n.d.). Sound transmission class guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=DOC_16419.pdf

3. SAFETY AND PERSONAL SECURITY

3.1. Egress.

Requirement:

In accordance with local fire codes, every dwelling unit shall have at least two means of egress that serve as emergency escapes and rescue openings. Each egress shall lead outside without passing through another dwelling unit.

3.1.1. Egress routes shall be unobstructed. Doors along egress routes shall be openable from the inside without the use of a key or tool.

3.1.2. Any bedroom located below the fourth floor shall be provided with an exterior window openable from the inside that can be used as a means of emergency egress.

3.1.3. If a habitable room partly or totally below grade is intended for sleeping purposes, at least one exterior window shall be openable from the inside and accessible for easy and ready use as an emergency exit. The window shall have the following minimum dimensions: a net clear opening of 5.7 ft² (0.53 m²); 24 inches (61 cm) from the top of the sill to the bottom of head of the window frame; a width of 20 inches (51 cm); and a sill height of not more than 44 inches (112 cm) from the floor.

3.1.3.1. If the window opening sill height is below ground elevation, the horizontal dimension (width times projection) of the window well shall be at least nine ft² (0.84 m²) and the horizontal projection shall extend at least 36 inches (91 cm) from the exterior side of the window.

3.1.3.2. If the egress window well is deeper than 44 inches (112 cm) below ground elevation, there shall be steps or a ladder permanently attached to serve as an emergency exit to ground elevation. The distance between steps or rungs shall be 18 inches (46 cm), their width shall be at least 12 inches (31 cm), and their projection from the wall shall be between three and six inches (7.6 and 15 cm).

3.1.3.3. A door leading directly from the room to the outside that provides an exit at grade level shall fulfill this requirement.

Rationale:

Escape from fire is an important public safety protection. Proper configuration of egress will prevent falls that can result in physical injury, such as bruising, fractures, head, brain, and spinal injuries; allow the timely evacuation of residents in an emergency; and permit entry by rescue workers wearing emergency equipment on their backs.

References:

- International Code Council. (n.d.). Accessible means of egress. Retrieved from <http://www.iccsafe.org/safety/Documents/MeansofEgressBroch.pdf>
- International Code Council. (2012). International fire code, Chapter 10.
- International Code Council. (2012). International residential code, §§ 310, 311.

3.2. Locks/Security.

Requirement:

Means of egress (i.e., windows and/or doors) from dwellings shall have locks.

3.2.1. Following each change in tenancy, the locking devices on the dwelling unit entry doors shall be changed.

3.2.2. Dwelling unit entry doors shall be equipped with a dead bolt lock with a minimum throw of one inch (2.54 cm) that is capable of being opened from the interior side without a key and a device that permits the occupant to see a person at the entry door without fully opening the door.

3.2.3. Exterior doors on multifamily buildings with a common entry that leads into a foyer or hallway shall have a self-closing mechanism and shall be equipped with a locking device capable of being opened from the interior side without a key.

3.2.4. Exterior windows that are capable of being opened and are potential means of entry shall be equipped with a lock on the interior side.

Rationale:

Inadequate home security may result in a fear of a possible burglary occurrence or recurrence, stress caused by a burglary, and injuries caused to occupants by an intruder (aggravated burglary). The most common harm suffered as a result of burglary or fear of burglary is emotional stress. The emotional impact is greater for burglaries where there is successful entry to the dwelling. The risk of entry increases with declining levels of security.

References:

- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

3.3. Smoke Alarm.

Requirement:

Every dwelling unit shall have a functioning smoke alarm located on the ceiling outside each sleeping area in the immediate vicinity of the bedrooms, in each additional room used for sleeping purposes, and on every level except crawlspaces and uninhabitable attics. In dwellings or dwelling units with split levels that have no door between adjacent levels, the smoke alarm installed on the upper level shall suffice for the adjacent lower level. In the event a smoke alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.3.1. In multifamily housing, a tamper-proof smoke detection system (interconnected with a central fire alarm system) or stand-alone smoke alarms in good working condition shall be installed on each level including basements, in heating system and storage rooms, in garages, and in other common areas.

3.3.2. Battery-operated smoke alarms and the battery backup for hardwired smoke alarms shall be powered with long-lasting batteries.

3.3.3. Alternative visual notification shall be provided for hearing-impaired occupants.

 Stretch Provisions:

- Smoke alarms shall be hardwired with battery backup.
- Smoke alarm batteries shall be sealed-in and tamper-proof.
- Multiple smoke detection stations shall be interconnected.
- Every dwelling unit shall have both a photoelectric smoke alarm and an ionization smoke alarm.

Rationale:

Smoke alarms that are properly installed and maintained play a vital role in reducing fire-related deaths and injuries. Having a working smoke alarm reduces the chances of dying in a reported fire by half. When smoke alarms fail to operate, it is usually because batteries are missing, disconnected, or dead. Research has demonstrated that almost one-quarter of smoke alarm failures were due to dead batteries. Interconnection of smoke alarms allows the warning to reach all occupants at the same time.

Ionization smoke alarm sensors are best suited to detect smoke from highly combustible materials that can create flaming fires, such as flammable liquids, newspapers, and paint cleaning solutions. Photoelectric models are best suited for living rooms, bedrooms, and kitchens, which often contain large pieces of furniture, such as sofas, chairs, mattresses, countertops, et cetera, which will burn slowly and create more smoldering smoke than flames.

References:

- Cleary, T. (2009). Performance of dual photoelectric/ionization smoke alarms in full-scale fire tests. Gaithersburg, MD: National Institute of Science and Technology Building and Fire Research Laboratory. Retrieved from http://www.nfpa.org/~media/files/training/conference%20and%20expo/2009%20proceedings/performance_of_combination_photoelectric-ionization_smoke_ala.pdf

- International Code Council. (2012). International fire code, § 907.
- National Fire Protection Association. (n.d.). Smoke alarm safety at home. Retrieved from: <http://www.nfpa.org/~media/files/safety%20information/safety%20tip%20sheets/smokealarmssafetytips.pdf>

3.4. Fire Extinguisher.

Requirement:

Fire extinguishers shall be rated Class ABC and shall be readily accessible.

3.4.1. Each dwelling unit shall have at least one 10-pound fire extinguisher in good working condition in or near the kitchen.

3.4.2. In multifamily housing, there shall be fire extinguishers in common areas on each floor and in areas where flammable or combustible liquids are stored, used, or dispensed. The fire extinguishers shall be located in conspicuous, unobstructed locations that are not obscured from view.

✓ Stretch Provision:

- The dwelling shall have an automatic fire sprinkler system that complies with the applicable locally adopted fire code. If the local fire code has no sprinkler requirement or if no local fire code exists, the installed automatic fire sprinkler system shall comply with either the International Fire Code® or the National Fire Protection Association Standard 1.

Rationale:

Cooking equipment is the second-leading cause of apartment or multifamily housing fire deaths, ranking only behind smoking. Kitchens are the leading area of origin for home structure fires: approximately two of every five (42 percent) home structure fires started in the kitchen or cooking area. Sixteen percent of the civilian deaths, 38 percent of the civilian injuries, and 14 percent of the direct property damage resulted from these fires. Two-thirds (66 percent) of the reported apartment or multifamily housing fires and one-third (33 percent) of the fires in one- or two-family homes originated in the kitchen. When an extinguisher is used, it put out the fire completely in half of the cases and minimized the fire but did not completely put it out in almost one-quarter of the incidents.

Reference:

- Ahrens, M. (2013). Home fires involving cooking equipment. National Fire Protection Association. Retrieved from <http://www.nfpa.org/research/reports-and-statistics/fire-causes/appliances-and-equipment/cooking-equipment>

3.5. Carbon Monoxide Alarm.

Requirement:

Every dwelling unit shall have at least one functioning carbon monoxide (CO) alarm on every habitable floor and outside each separate sleeping area, in the immediate vicinity of every bedroom. In the event a CO alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.5.1. Battery-operated CO alarms shall be powered with long-lasting batteries. Hardwired CO alarms shall have long-lasting battery backup.

3.5.2. Alternative visual notification shall be provided for hearing-impaired occupants.

✓ Stretch Provisions:

- CO alarms and combination smoke/CO alarms shall include voice notification.
- If a combination ionization sensor smoke/CO alarm is used, a second smoke alarm utilizing photoelectric smoke sensors shall be installed.
- CO alarm batteries shall be sealed-in and tamper-proof.
- CO present at or above 30 ppm (35 mg/m³) when measured over one hour, or above nine ppm (10.5 mg/m³) measured over eight hours, shall be deemed hazardous. The cause of a hazardous indoor CO level shall be investigated to identify and eliminate its source.

Rationale:

CO is a colorless, odorless, and extremely toxic gas. Blood hemoglobin has a greater affinity for CO than it does for oxygen, which means that inhalation of this gas will reduce the ability of the blood to take up oxygen. At high concentrations, CO can cause unconsciousness and death. The highest rate of deaths from CO poisoning occurs in older age groups, especially in people aged 75-plus years. This may be for several reasons, including the increasing prevalence of cardiovascular illness and neurological decline at older ages and the fact that the elderly tend to spend a high proportion of their time at home indoors.

At lower concentrations, CO may cause a range of symptoms from headaches, dizziness, weakness, nausea, confusion, and disorientation to fatigue. These symptoms are sometimes confused with influenza and sometimes with depression. In people with ischemic heart disease, it can result in episodes of increased chest pain. CO may also impair fetal development. Those most vulnerable to ill health effects caused by low-level CO exposure include unborn children, infants, children, the elderly, and people with anemia or heart or lung disease.

References:

- American Academy of Pediatrics Council on Environmental Health. (2012). Carbon monoxide, in Etzel R. A., ed. Pediatric environmental health, 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics, 367–377.
- National Fire Protection Association. (2012, August 13-14). NFPA technical committee on residential occupancies, NFPA 101 and NFPA 5000 first draft meeting minutes. Retrieved from http://www.nfpa.org/assets/files/aboutthecodes/101/bld-saf-res_fmminutes-08-12.pdf
- National Fire Protection Association. (2009). NFPA 720, Standard for the installation of carbon monoxide (CO) detection and warning equipment.
- Underwriters Laboratories. (2009). ANSI/UL 2034, Standard for single and multiple station carbon monoxide alarms.
- U.S. Consumer Product Safety Commission. (2001, January). CPSC recommends carbon monoxide alarm for every home. Retrieved from <http://www.cpsc.gov/en/Recalls/2001/CPSC-Recommend-Carbon-Monoxide-Alarm-for-Every-Home/>
- U.S. Consumer Product Safety Commission. (n.d.). Carbon monoxide questions and answers. <http://www.cpsc.gov/en/Safety-Education/Safety-Education-Centers/Carbon-Monoxide-Information-Center/Carbon-Monoxide-Questions-and-Answers-/>
- U.S. Environmental Protection Agency. (n.d.). An introduction to indoor air quality (IAQ): Carbon monoxide. <http://www.epa.gov/iaq/co.html>
- World Health Organization. (2010). Guidelines for indoor air quality: Selected pollutants. Copenhagen: World Health Organization Regional Office for Europe. Retrieved from http://www.euro.who.int/_data/assets/pdf_file/0009/128169/e94535.pdf

3.6. Walking Surfaces.

Requirement:

Every interior and exterior stairway, ramp, deck, porch, and balcony shall be maintained structurally sound, in good repair, properly anchored, and capable of supporting the imposed loads.

3.6.1. Treads on exterior stairways shall have nonskid surfaces.

3.6.2. Every interior and exterior stairway with four or more risers shall have at least one structurally sound continuous handrail installed not less than 34 inches (86.7 cm) and not more than 38 inches (96.5 cm), measured vertically from above the nose of the tread. The handrail shall be firmly fastened, capable of supporting a load of 300 pounds, and in good condition. If a side of a stairway is open to the floor or grade below, and the handrail provides the guard required by Subsection 3.7, the rail shall be supported by balusters 34 to 38 inches (86.7 to 96.5 cm) in height, measured vertically from the nose of the tread.

✓ Stretch Provisions:

- Every interior and exterior stairway shall have uniform risers and treads. Risers shall be no higher than 7¾ inches (19.6 cm) and treads shall be at least 10 inches (25.4 cm) deep, unless the existing space and construction do not allow a reduction in pitch or slope.
- Interior and exterior stairways shall have handrails on both sides. Railings shall have a graspable perimeter measuring four to six inches (10–16 cm), and if noncircular in shape, shall have no sharp corners and a width no smaller than five-eighths inch (1.5 cm).

Rationale:

Inadequate handrails and railings on stairways, ramps, decks, porches, and balconies can result in slips, trips, and falls that cause physical injury, such as bruising; fractures; head, brain, and spinal injuries; and death. The likelihood of a fall is doubled if there is no wall or guarding to one side of the stair. Similarly, the lack of any handrail doubles the likelihood of a fall, even if there is a wall to both sides of the stairs. Stair tread depth affects stability during stair descent. The nature of injury is in part dependent on the distance of a fall, and in part on the nature of the surface onto which the victim falls. Although falls on level ground tend to result in relatively minor injuries as compared to other falls, they occur more frequently.

References:

- International Code Council. (2012). International residential code, §§ 311.7, 312.1.2, 312.1.3, 312.2.1.
- MetLife. (2013). The essentials: Falls and fall prevention. Retrieved from <https://www.metlife.com/assets/cao/mmi/publications/essentials/mmi-falls-fall-prevention-essentials.pdf>
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

Resources:

- Roys, M. (2013). Refurbishing stairs in dwellings to reduce the risk of falls and injuries. Garston, U.K.: IHS Building Research Establishment Press.

3.7. Guards.

Requirement:

3.7.1. Every stairway, porch, patio, landing, and/or balcony located more than 30 inches (76.2 cm) above an adjacent area shall have a structurally sound guard between 30 inches (76.2 cm) and 42 inches (107 cm) high, measured vertically from the floor. The guard shall be firmly fastened, capable of supporting normally imposed loads, capable of being opened in case of emergency, and in good condition. Balusters with a minimum thickness of one-half inch (13 mm) shall be placed at intervals that do not allow passage of a sphere greater than four (10.2 cm) inches in diameter. There shall be no climbable cross pieces. If the balusters do not reach the floor, the narrowest opening between the bottom of the stair guard and the floor shall be a maximum of four inches (10.2 cm).

3.7.2. If the vertical distance from the top of the sill of an exterior window opening to the finished grade or other surface below is greater than 72 inches (183 cm), and the vertical distance from the top of the sill to the floor of the room is less than 36 inches (91.5 cm), the window shall have a fall prevention device compliant with ASTM F2006 or ASTM F2090.

3.7.2.1 The fall prevention device for a window that provides access to a fire escape or is otherwise designated for emergency egress shall be compliant with ASTM F2090.

Rationale:

Falls can result in physical injury, such as bruising; fractures; and head, brain, and spinal injuries, as well as death. The nature of injury is in part dependent on the distance of a fall, and in part on the nature of the surface onto which the victim falls. Each year, 5,100 children younger than 18 years of age are treated in U.S. hospital emergency departments for injuries related to falls from windows. Such falls account for approximately eight deaths among children ages five and under each year. Falls from windows cause more severe injuries and deaths than any other

type of fall. A commercially available window guard designed to swing open to allow escape in the event of a fire costs as little as \$20. After window guard requirements took effect in Boston and New York City, the incidence of falls by children from windows decreased 96 percent over 10 years.

References:

- American Society of Testing and Materials. (2010). F2006, Standard safety specification for window fall prevention devices for non-emergency escape (egress) and rescue (ingress) windows.
- American Society of Testing and Materials. (2010). F2090, Standard specification for window fall prevention devices with emergency escape (egress) release mechanisms.
- City of New York. (2012, June). Rules. Title 24 §12, Window guard regulations. Retrieved from <http://www.nyc.gov/html/doh/html/environmental/win-reg.shtml>
- Harris, V., Rochette, L. M., and Smith, G. (2011, September). Pediatric injuries attributable to falls from windows in the United States 2001–2008. *Pediatrics*, 128, 455–462.
- International Code Council. (2012). International property maintenance code, § 307.1.
- International Code Council. (2013, April). Climable guards. Retrieved from <http://www.iccsafe.org/cs/CTC/Documents/0413-meeting/ChildWindowSafety.pdf>
- MetLife. (2013). The essentials: Falls and fall prevention. Retrieved from <https://www.metlife.com/assets/cao/mmi/publications/essentials/mmi-falls-fall-prevention-essentials.pdf>
- National Fire Protection Association. (2006). 101 Life safety code. § 7.2.2.4.5.3.
- Nationwide Children's Hospital. (n.d.). Window falls. <http://www.nationwidechildrens.org/cirp-window-falls>
- Roys, M. (2013). Refurbishing stairs in dwellings to reduce the risk of falls and injuries. Garston, U.K.: IHS Building Research Establishment Press.

3.8. Chemical Storage.

Requirement:

3.8.1. Each dwelling unit shall have a cabinet or other storage space that is lockable or not readily accessible to children for the storage of medicine and household chemical agents.

3.8.2. Storage space for flammable and combustible liquids shall be available either in a building separate from the dwelling's habitable space or in an adjacent space that is not connected to the dwelling's ventilation system.

Rationale:

Poison control centers answer more than 3.6 million calls each year, or one call every eight seconds. According to the American Association of Poison Control Centers, children younger than six years old account for about half of the calls placed to poison centers. A flammable or combustible liquid, gas, or associated piping or filter is the main contributor in four percent of fires and eight percent of fire-caused deaths.

References:

- American Association of Poison Control Centers. (n.d.). www.aapcc.org
- U.S. Environmental Protection Agency, Poison Prevention Program. (n.d.). <http://www.epa.gov/pesticides/health/poisonprevention.htm>

3.9. Pools, Hot Tubs, and Other Water Features.

Requirement:

3.9.1. Swimming pools, hot tubs, spas (except a residential spa or hot tub with a safety cover complying with ASTM F 1346-91), ornamental ponds, and other water features that hold water more than 24 inches (61 cm) in depth shall be completely surrounded by a fence or barrier at least 48 inches (122 cm) in height above the finished ground level that is accessible only through a self-closing and self-latching gate. The gate's latch shall

be located 54 inches (137 cm) above the bottom of the gate on the interior side of the gate facing the water feature. The fence and gate shall not have climbable crosspieces.

3.9.2. All pools and spas shall have anti-entrapment drain covers compliant with ANSI/ASME A112.19.8, ANSI/APSP 16-2011, or any successor standard on every suction outlet.

3.9.3. Pool drains and drain covers shall be clearly visible and in good repair. Where there is a single main drain (other than an unblockable drain), a second anti-entrapment system shall be installed.

3.9.4. Luminaries, receptacles, and other outlets shall have ground-fault circuit interrupter (GFCI) protection.

Rationale:

It takes only inches of water for a small child to drown, so taking extra safety steps at home and around pools, spas, and all bodies of water can prevent drowning incidents. The majority of deaths and injuries in pools and spas involve children ages one to two and occur in residential settings. Drowning is the leading cause of unintentional death to children ages one to four and the second-leading cause of injury-related death in children aged one to 14 years in the U.S.

Children can become entrapped and held under water by suction openings in broken, uncovered, or poorly covered drains. Hair, jewelry, and bathing suit entanglement, as well as the lodging of arms, legs, fingers, or other body parts can pose entrapment hazards. Sitting on a broken or uncovered drain may cause evisceration injuries or disembowelment.

References:

- Consumer Product Safety Commission. (n.d.). Requirements for public pools. Retrieved from <http://www.poolsafely.gov/industry-operators-professionals/public-pool-requirements/>
- Consumer Product Safety Commission. (n.d.). Safety barrier guidelines for residential pools. Retrieved from <http://www.poolsafely.gov/wp-content/uploads/362.pdf>
- International Code Council. (2012). International property maintenance code, §§ 303, 605.3.
- International Code Council. (2012). International residential code, § E4203.
- Virginia Graeme Baker Pool and Spa Safety Act. 15 U.S.C. §§ 8001–8008. (2007).

4. LIGHTING AND ELECTRICAL SYSTEMS

4.1. Electrical System.

Requirement:

Every dwelling unit shall have electric service, outlets, and fixtures that are grounded and installed properly, maintained in good and safe working condition, and connected to a source of electric power.

4.1.1. Every dwelling unit shall be supplied with a three-wire, 120/240-volt, single-phase electrical service that is not shared with another dwelling unit.

4.1.2. Temporary wiring or extension cords shall not be used as permanent wiring.

✓ Stretch Provision:

- The electrical service shall have a rating of not less than 100 amperes.

Rationale:

Faulty electrical systems result in fires, damage to property, burns, injuries, and death. In residential settings, children are more likely to be injured than adults, primarily from inserting household objects into electrical outlets.

References:

- Electrical Safety Foundation International. (n.d.). Electrical safety workbook: A guide to understanding and maintaining your home's electrical system. Retrieved from www.esfi.org
- U.S. Fire Administration. (n.d.). Electrical fire safety outreach materials. Retrieved from http://www.usfa.fema.gov/citizens/home_fire_prev/electrical.shtm

4.2. Outlets.

Requirement:

Every habitable room shall have at least two separate and remote grounded duplex electric receptacle outlets.

4.2.1. Each kitchen and each room containing a toilet, sink, bathtub, or shower stall shall have at least one grounded duplex electric receptacle outlet protected by ground-fault circuit interrupter (GFCI).

4.2.2. Receptacle outlets in garages, crawl spaces, unfinished basements, and outdoors shall be protected by GFCIs.

✓ Stretch Provisions:

- Habitable rooms shall have sufficient receptacle outlets so that no location on a wall is more than six feet from an outlet.
- Every countertop space 12 inches (305 mm) or wider shall have a grounded duplex electric convenience receptacle outlet protected by a GFCI. No section of counter shall be more than 24 inches (610 mm) measured horizontally from an outlet.
- Receptacle outlets in habitable rooms that are not protected by GFCIs shall be protected by arc-fault circuit interrupters (AFCIs).

Rationale:

Unlike circuit breakers and fuses, GFCIs are installed to protect the user from electrocution. These devices provide protection against electrical shock and electrocution from ground faults or contact with live parts by a grounded individual. They constantly monitor electrical currents flowing into a product. If the electricity flowing through the product differs even slightly from that returning, the GFCI will quickly shut off the current. GFCIs detect amounts of electricity much smaller than those required for a fuse or circuit breaker to activate and shut off the circuit. UL lists three types of GFCIs designed for home use that are readily available, fairly inexpensive, and simple to install. AFCIs prevent electrical fires by protecting branch circuits.

References:

- International Code Council. (2012). International residential code. § E3901, E3902.1.
- National Fire Protection Association. (2013). Standard 70, national electrical code. Retrieved from <http://www.nfpa.org/70>
- U.S. Centers for Disease Control and Prevention & U.S. Department of Housing and Urban Development. (2006). Healthy housing reference manual. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm

4.3. Natural Lighting.

Requirement:

Every habitable room shall receive daylight from at least one exterior window or skylight.

4.3.1. If a habitable room receives daylight from an adjacent room or area used seasonally, such as a porch, the daylight through this interconnection shall be available year-round.

4.3.2. Every bathroom and kitchen shall comply with the daylight requirement for habitable rooms contained in this section, unless the room is equipped with a ventilation system consistent with Subsection 5.3.

Rationale:

Research has revealed a strong relationship between light and human physiology. The effects of light on both the human eye and human skin are notable. Light allows us to see and affects body rhythms and psychological health. Lack of natural lighting has been linked to depression.

References:

- International Code Council. (2012). International property maintenance code, § 402.1, 403.2.
- U.S. Centers for Disease Control & Prevention and U.S. Department of Housing and Urban Development. (2006). Healthy housing reference manual. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

4.4. Artificial Lighting.

Requirement:

Each room containing a toilet, sink, bathtub, or shower stall shall contain at least one ceiling- or wall-type electric lighting fixture. Each non-habitable room, including laundry rooms, furnace rooms, and public halls, shall contain at least one ceiling- or wall-type electric lighting fixture.

4.4.1. Light switches that control ceiling- or wall-type electric light fixtures shall be located conveniently for safe use.

4.4.2. Every public hall, exterior entry door, and stairway in multifamily housing shall be illuminated at all times by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area. The distance between light fixtures shall not be greater than 30 feet (762 cm).

4.4.3. In a building containing one or two dwelling units, every public hall, exterior entry door, and stairway shall be illuminated by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area that is controlled by a three-way switch or a motion-activated device.

✓ Stretch Provisions:

- Polychlorinated-biphenyl (PCB)-containing lighting ballasts (e.g., older pre-1978 T-12 lighting ballasts) shall be removed, replaced with lighting fixtures that do not contain PCBs, and disposed of in accordance with applicable state and federal regulations.

- The lighting fixtures in public halls, stairways, and entries shall provide 1600 lumens for every 200 ft² (18.6 m²) of floor area.
- The parking areas and walkways of multifamily housing shall be illuminated by outdoor lighting devices suitable for the premises.

Rationale:

Adequate lighting is important in allowing people to see unsanitary conditions and to prevent injury, thus contributing to a healthier and safer environment. Improper indoor lighting can also contribute to eyestrain from inadequate illumination, glare, and flicker. Artificial light is particularly important where domestic tasks require adequate light; for example, in the kitchen over worktops, sinks, and ranges.

References:

- International Code Council. (2012). International property maintenance code, § 402.2.
- U.S. Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. (2006). Healthy housing reference manual. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- U.S. Environmental Protection Agency. (2012). Polychlorinated biphenyls (PCBs) manufacturing, processing, distribution in commerce, and use prohibitions. Retrieved from www.epa.gov/pcb
- U.S. Environmental Protection Agency. (n.d.). Compact fluorescent light bulbs. Retrieved from <http://www2.epa.gov/cfl>

5. THERMAL COMFORT, VENTILATION, AND ENERGY EFFICIENCY

5.1. Heating, Ventilation, and Air Conditioning Systems.

Requirement:

Facilities for heating, cooling, ventilation, and humidity control shall be maintained in good working condition and operated when necessary for the health and comfort of the occupants and in accordance with the design capacity of the installed equipment. Within 48 hours after equipment has become inoperative due to a mechanical problem or power failure other than a utility outage, an alternative safe source of necessary heating, ventilating, or cooling shall be provided.

5.2. Heating System.

Requirement:

Except in Climate Zone 1, every dwelling shall have a properly installed heating system in good and safe working condition that is capable of safely and adequately heating all habitable rooms, bathrooms, and toilet rooms. The heating system, filtration components, distribution components, heating elements, and cooling elements (if provided), shall be sealed, cleaned, maintained, and operated in accordance with manufacturer specifications and shall be inspected and serviced annually by a licensed heating, ventilation, and air conditioning systems contractor.

5.2.1. Venting and Air Supply for Heating Equipment. Furnaces, water heaters, wood stoves, and other devices that employ combustion-burning fuel shall be vented to the outside of the structure in an approved manner that meets manufacturer specifications and is in compliance with applicable codes and standards (e.g., ANSI 223.1/NFPA 54 National Fuel Gas Code, NFPA 31 Standard for the Installation of Oil-Burning Equipment, NFPA 211 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances) and shall be supplied with sufficient air to support the continuous complete combustion of fuel and prevent backdrafting.

5.2.2. Minimum Heat Temperature. The heating system shall be capable of maintaining a minimum room temperature of 68° F (20° C) in every habitable room, bathroom, and toilet room.

5.2.3. Heating Supply. If the dwelling unit is rented, leased, or let on terms either expressed or implied that heat will be supplied, heat shall be provided to maintain a minimum temperature of 68° F (20° C) in habitable rooms, bathrooms, and toilet rooms; and at no time during the heating season shall the system allow the temperature to exceed 78° F (25° C) in any room.

5.2.4. Forced-Air Systems. Any dwelling with a forced-air system shall have at least one thermostat within each dwelling unit capable of controlling the heating system, and cooling system if provided, to maintain temperature set point between 55° F (13° C) and 85° F (29° C) at different times of the day. The system shall have a clean air filter installed in accordance with manufacturer specifications at each change in tenancy and at least annually. This filter shall have a minimum efficiency reporting value of eight (MERV-8) unless the system is not equipped to use a MERV-8 filter.

5.2.5. Steam and Hot Water Systems. In dwellings with heating equipment utilizing steam or hot water with a temperature of 110° F (43° C) or greater, protective covers/barriers shall be installed on and maintained for exposed surfaces of baseboard units, radiators, and piping between radiators.

5.2.6. Wood Stoves. A wood stove manufactured after June, 1988 shall have a manufacturer's label certifying compliance with the emission standard at 40 C.F.R. § 60 part AAA. Clearance of 30 inches (76 cm) shall be maintained between combustible materials and a stove with no heat shield. Where a heat shield is present, the clearance between combustible materials and the stove shall be compliant with manufacturer specification for the heat shield.

✓ Stretch Provisions:

- Any new combustion heating equipment installed in occupied or conditioned spaces shall be power-vented or sealed (direct-vented) combustion equipment.
- The heating system shall be controlled by a programmable thermostat to avoid temperature extremes.

- The dwelling shall have provisions to maintain the indoor temperature below a maximum of 85° F (29° C) through the use of mechanical air conditioning, ventilation systems, or passive design features.
- Air filters shall be replaced at least every three months.

Rationale:

Exposure to cold temperatures can lead to hypothermia, frostbite, and death. There is a continuous relationship between indoor temperature and vulnerability to cold-related death. As temperatures rise, thermal stress increases, initially triggering the body's defense mechanisms, such as sweating. High temperatures can increase dehydration, cardiovascular strain, and trauma, and, when temperatures exceed 77° F (25° C), cause mortality and stroke.

Poorly maintained HVAC systems may pose safety risks, including fire and explosion hazards and exposure to combustion-related chemical and physical agents, such as carbon monoxide and particulate matter. Exposure to carbon monoxide can lead to headaches, nervous systems effects, and asphyxiation.

References:

- Anderson, G. B., Dominici, F., Wang, Y., McCormack, M. C., Bell, M. L., & Peng, R. D. (2013). Heat-related emergency hospitalizations for respiratory diseases in the Medicare population. *American Journal of Respiratory and Critical Care Medicine*, 187(10), 1098-1103. Retrieved from <http://www.atsjournals.org/doi/abs/10.1164/rccm.201211-1969OC>
- International Code Council. (2009). International energy conservation code, Table 402.1.1.
- International Code Council. (2012) International property maintenance code. §§ 603.2, 603.5, 602.2.2, 602.2.3.
- Ostro, B., Rauch, S., Green, R., Malig, B. & Basu, R. (2010). The effects of temperature and use of air conditioning on hospitalizations. *American Journal of Epidemiology*, 172(9), 1053–1061. Retrieved from <http://aje.oxfordjournals.org/content/172/9/1053.abstract?sid=d5111b06-c02a-4bd4-863a-27ba95c0a75a>
- Standards of Performance for New Residential Wood Heaters, 40 C.F.R. 60 Subpart AAA (1988).
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- U.S. Environmental Protection Agency. (n.d.). An introduction to indoor air quality (IAQ): Carbon monoxide (CO). <http://www.epa.gov/iaq/co.html>

Resources:

- Air Conditioning Contractors of America. (2010). HVAC quality installation specification, ANSI/ACCA 9. Retrieved from <https://www.acca.org/Files/?id=693>
- Building Performance Institute. (2012). Home energy auditing standard, BPI-1100-T-2012. http://www.bpi.org/files/pdf/BPI-1100-T-2012_Home%20_Energy_Auditing_Standard.pdf
- Department of Energy and National Renewable Energy Laboratory. Heating and cooling, forced air, system assessment and maintenance. Standard work specifications. Retrieved from <https://sws.nrel.gov/spec/53003>
- National Air Duct Cleaners Association. (2013). ACR, the NADCA standard for assessment, cleaning, and restoration of HVAC systems. Retrieved from <http://info.associationheadquarters.com/2013-acr>
- U.S. Environmental Protection Agency. (n.d.). Wood heater compliance monitoring program. Retrieved from <http://www.epa.gov/oecaerth/monitoring/programs/caa/woodheaters.html>
- U.S. Environmental Protection Agency. (n.d.). Remodeling your home? Have you considered indoor air quality? Combustion appliance backdrafting. Retrieved from <http://www.epa.gov/iaq/homes/hipbackdrafting>

5.3. Ventilation.

Requirement:

Natural or mechanical ventilation, or a combination of the two, shall deliver fresh air to every habitable room and bathroom and be capable of removing moisture-laden air and other contaminants generated during cooking, bathing, and showering.

5.3.1. Every dwelling shall have a ventilation system compliant with ASHRAE Standard 62.2 (Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings) or ASHRAE 62.1 (Ventilation for Acceptable Indoor Air Quality) as applicable to the dwelling.

5.3.2. The air exhausted from a bathroom, toilet room, kitchen, clothes dryer, or basement shall not be vented into any other parts of the building's habitable space or an attic; such air shall discharge directly to the outdoors but not near any intake on the building exterior.

5.3.2.1. The exhaust vent from a clothes dryer shall consist of a rigid or corrugated semi-rigid metal duct.

5.3.3. Pipes, ducts, conductors, fans, and blowers shall not discharge gases, steam, vapor, hot air, grease, smoke, odors, or other gaseous or particulate wastes directly upon abutting or adjacent public or private property or that of another occupant. Vent pipe openings and any pest-proofing screens that cover them shall be maintained free of debris.

5.3.4. Basement air shall not be used as supply air for an air handling system.

 Stretch Provision:

- HVAC equipment shall have the capacity to maintain indoor relative humidity (RH) at or below 60 percent.

Rationale:

Proper circulation of outdoor ventilation air throughout a habitable space, naturally through openings in the building envelope and/or mechanically using fans and HVAC systems, is important to dilute and remove airborne indoor chemical agents, and reduce airborne transmission of biological agents, humidity, and mold. Inadequate ventilation also increases carbon dioxide in habitable spaces, which may yield drowsiness and headaches and can result in elevated levels of volatile organic chemicals that off-gas from interior dwelling components. Inadequate ventilation also increases interior humidity. Studies show the association between dampness and poor health. Damp environments are associated with the growth of dust mites, cockroaches, and mold. Some of the health effects include worsened asthma, wheezing, nausea and vomiting, headaches, fever, and diarrhea. Inadequately maintained or operated HVAC systems can lead to microbial growth.

References:

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5.4. Air Sealing.

Requirement:

Openings into dwellings and dwelling units shall be sealed to limit uncontrolled air movement.

5.4.1. Exterior doors, windows and skylights, openings where siding and chimneys meet, utility penetrations, electrical outlets, and other openings shall be weathertight.

5.4.1.1. Pads, door sweeps, weather stripping, and seals shall be used and maintained to minimize air leaks.

5.4.2. Openings separating an attached garage from a habitable room, including doors, ceilings, floors, and utility and ductwork penetrations, shall be sealed.

5.4.2.1. Any doorway between a habitable room and a garage shall be equipped with a wood door not less than $1\frac{3}{8}$ inches (35 mm) in thickness, a solid or honeycomb core steel door not less than $1\frac{3}{8}$ inches (35 mm) thick, or a 20-minute fire-rated door. The door shall have an automatic closing mechanism and be sealed with weather stripping.

5.4.2.2. There shall be no door, window, or other opening from a garage into a room used for sleeping purposes.

5.4.3. Heating and air conditioning system ductwork and air handling units located in an attached garage shall be correctly insulated and sealed.

5.4.3.1. There shall be no supply or return vent openings in a garage that connect to air handlers serving habitable spaces.

5.4.4. In a multifamily building, walls, ceilings, and floors that separate a dwelling unit from neighboring units, corridors, chases, stairwells, and other openings shall be sealed.

✓ Stretch Provision:

- Air handling equipment and associated ductwork shall be relocated from a garage to an area within the conditioned space.

Rationale:

Controlling air leakage into homes can save the occupant money by making the home energy efficient and can prevent health problems associated with moisture. Airborne moisture can lead to mold growth, which causes respiratory distress in children and adults, including those with asthma, allergies, or other respiratory diseases. Air-sealing and isolation of attached garages is important to prevent migration of carbon monoxide and other airborne chemical agents (e.g., from vehicle exhaust, fuels, solvents, and other chemicals stored or used in the garage) into habitable rooms. Sealing of each unit can help prevent migration of smoke, cooking odors, noise, radon, pests, and other elements into the dwelling unit.

References:

- International Code Council. (2012). International residential code. § 302.5.1.
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- American Society of Heating, Refrigerating, and Air-Conditioning Engineers. (2013). 62.1 Standard, Ventilation and acceptable indoor air quality. Retrieved from <https://www.ashrae.org/resources--publications/bookstore/standards-62-1--62-2>
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6. MOISTURE CONTROL, SOLID WASTE, AND PEST MANAGEMENT

6.1. Moisture Prevention and Control.

Requirement:

Every foundation, roof, roofing component, exterior wall, door, skylight, and window shall be watertight, weathertight, free of persistent dampness or moisture, and in good condition.

6.1.1. The building's drainage system, such as footing or foundation drains, gutters, downspouts, rainwater collection containers, or other elements, shall direct water away from the structure.

6.1.2. Exterior wood surfaces shall be protected from the elements and decay by paint or other protective treatment. Weep holes in brickwork shall be left open.

6.1.3. Premises shall be graded and maintained to prevent the erosion of soil and to prevent the accumulation of water on the premises, within a crawlspace, or within the structure.

6.1.4. Interior and exterior surfaces and surface coverings, such as but not limited to carpet, wood, cellulose insulation, and paper, paint, and other wall coverings, including paper-faced gypsum board, shall have no signs of visible mold growth or chronic or persistent excessive dampness or moisture.

6.1.5. Building material that is discolored or deteriorated by mold or mildew or causes a moldy or earthy odor shall be cleaned, dried, and repaired. Structurally unsound material shall be removed and replaced.

6.1.5.1. Removal and repair of moldy material shall be conducted in accordance with New York City's Guidelines on Assessment and Remediation of Fungi in Indoor Environments, the Institute of Inspection, Cleaning, and Restoration Certification's IICRC S520 Standard and Reference Guide for Professional Mold Remediation, or the EPA guidelines for Mold Remediation in Schools and Commercial Buildings.

6.1.6. The underlying cause of excessive dampness or moisture or moldy or earthy odor shall be investigated and corrected.

6.1.7. Cold HVAC and plumbing components and systems (e.g., chilled-water pipes and valves, refrigerant piping, and valves) in readily accessible locations shall be sufficiently and continuously insulated to keep the temperature of their surfaces at least 10° F (4° C) above the dew point of the surrounding air.

6.1.8. Unless the crawl space is sealed and insulated from the outdoors, the crawl space shall be free of high-moisture conditions or be separated from the dwelling by an air seal or other method suitable to the climate and conditions.

✓ Stretch Provisions:

- Exterior weather-resistant barrier systems shall be used to reduce potential for water leaks and moisture intrusion.
- Water/mold-resistant materials shall be used on bathroom walls and floors, showers, and other areas of the home that are likely to be exposed to moisture.
- In warm-humid and mixed-humid climates:
 - Exterior wall insulations shall not include a vapor barrier/retarder material on the interior side (such as plastic sheeting or foil facing), with the exception of closed-cell foam insulation (spray or rigid), kraft-faced insulation, and seasonally adjusting membranes.
 - There shall be no vinyl wallpaper or other impermeable interior finish on the interior surface of exterior walls within an air-conditioned dwelling.
 - Exterior drainable rigid insulation systems shall be used to reduce wall assembly condensation risk.
- The building and its systems shall meet the following moisture management criteria:
 - When the building is being mechanically cooled, ventilation air shall be dried to a dew point value below the building's dew point.

- Condensation inside HVAC components and air distribution ductwork shall be drained to an appropriate sanitary drain or condensate collection system.
- Indoor surfaces of both occupied and unoccupied spaces shall not be cooled to temperatures so low as to create an average surface relative humidity (RH) of over 80 percent that lasts for more than 30 days on visible surfaces in occupied spaces and surfaces inside building cavities and unconditioned space.
- Indoor dew point shall be low enough to ensure no condensation occurs on the exposed surfaces of cool HVAC components or on building materials or furnishings.
- Humidifiers shall be sized, installed, and controlled so they do not overload the air with humidity, which increases the risk of condensation inside air distribution systems and exterior walls and roofing assemblies.

Rationale:

Damp indoor environments can increase the presence of biological agents such as mold, dust mites, and bacteria. These environments may also attract pests and cause building materials to deteriorate. Exposure to allergens can trigger allergic symptoms such as rhinitis, conjunctivitis, eczema, cough, and wheeze. For a sensitized person, repeated exposure can lead to asthma, and it appears that the severity of the asthma intensifies with increasing humidity, house dust mite, and mold levels. There is an association between dampness and upper respiratory tract symptoms, cough, wheeze, and asthma symptoms in sensitized persons. In addition there is limited or suggestive evidence that damp indoor environments are associated with dyspnea, lower respiratory illness in children, and asthma development.

Some fungi, particularly when in very high concentrations, can also colonize the airways of susceptible individuals, particularly asthmatics. Toxins from some molds (mycotoxins) can cause nausea and diarrhea, can suppress the immune system, and have been implicated in cases of pulmonary hemorrhage.

References:

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6.2. Solid Waste.

Requirement:

Every dwelling shall have adequate facilities for temporary storage of trash and recyclable materials.

6.2.1. There shall be trash containers outside the dwelling for the storage of trash awaiting collection or disposal. The total capacity of these facilities shall be sufficient to store occupants' trash between scheduled collection times, and shall be placed on a cleanable surface constructed to minimize spillage.

6.2.2. There shall be containers outside the dwelling for recyclable materials awaiting collection, with capacity sufficient to store occupants' recyclable materials between scheduled collection times.

✓ Stretch Provision:

- Exterior trash and recycling containers shall be placed at least 30 feet (nine meters) from the building, unless such space is not available.

Rationale:

In 2010, Americans generated about 250 million tons of trash and recycled and composted over 85 million tons of this material, equivalent to a 34.1 percent recycling rate. On average, we recycled and composted 1.51 pounds of our individual waste generation of 4.43 pounds per person per day. The risk that poorly stored or accumulated solid waste poses to health is difficult to quantify as little epidemiological work in this area has been reported recently. The potential health outcomes may include gastrointestinal disease (from spread of infection) and asthma and allergic rhinitis (from allergens). Household waste may, in addition, present a physical hazard of cuts to young children. Emotional distress is also commonly associated with pest infestations and accumulations of solid waste. Establishing solid waste collection, storage, and disposal provisions helps reduce pest infestations, the growth and spread of biological agents, odor emissions, and windblown litter.

References:

- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- U.S. Environmental Protection Agency. (n.d.). Municipal solid waste. <http://www.epa.gov/epawaste/nonhaz/municipal/index.htm>

6.3. Pest Management.

Requirement:

Integrated pest management (IPM) methods shall be used to maintain every dwelling free of infestation, openings that allow pest entry, conditions that harbor pests or provide them with food or water, and visible pest residue or debris.

6.3.1. A pest management professional who has an IPM certification or a person trained in IPM shall develop the IPM program for a multifamily building.

6.3.2. Every dwelling, premise, accessory structure, and fence shall be maintained in good repair, free of pest infestation, and inspected for pests and building conditions that attract and support pests.

6.3.2.1. There shall be no accumulation of trash, paper, boxes, lumber, scrap metal, food, or other materials that support rodent harborage in or about any dwelling or premises. Stored materials shall be placed in boxes or stacked in stable piles elevated at least six inches (152 mm) above the ground or floor and at least six inches (152 mm) from the walls. Stored materials shall not block any egress routes.

6.3.2.2. There shall be no trees, shrubs, or other plantings in the soil within six inches (152 mm) of any dwelling.

6.3.2.3. There shall be no accumulation of water in or about any dwelling or premises.

6.3.3. Every openable window and storm door shall be supplied with adequate screens to prevent the entry of pests.

6.3.4. There shall be no holes or open joints in exterior walls, foundations, slabs, floors, or roofs that equal or exceed one-eighth inch (3 mm).

6.3.4.1. The areas surrounding windows, doors, pipes, drains, wires, conduits, vents, and other openings that penetrate exterior walls shall be sealed with low-VOC caulk or closed cell insulation.

6.3.5. Pest infestation and the underlying cause shall be eliminated using control methods consistent with IPM, such as exclusion, sanitation, and least-risk pesticides scaled to and designed for the targeted infestation.

6.3.5.1. Foggers and organic phosphates shall not be used to control or eliminate pests.

Rationale:

Poorly stored food waste will attract pests. These pests may then come into contact with food before it is prepared or eaten or may come into direct contact with persons. Rodents have long been linked to property destruction and disease. Rodents are known to be infected with pathogenic organisms, including zoonotic agents such as *Yersinia enterocolitica* (Yersiniosis), *Listeria* spp (Listeriosis), *Cryptosporidium parvum* (Cryptosporidiosis), *Toxoplasma gondii* (Toxoplasmosis), *Leptospira* spp (Leptospirosis), *Trichinella spiralis*, and *Trichuris* spp (Whipworm infection). Proper food storage, rat-proofing construction, and ensuring good sanitation outside the home have served to eliminate or reduce rodent problems in the 21st century home.

Children who live in dwellings infested with cockroaches show high levels of sensitivity to cockroach allergen. Contact with cockroaches can cause dermatitis, urticaria, rhinitis, bronchitis, and asthma. Some people have an aversion to insects amounting to a phobia and can suffer anxiety when in the presence of the insects. Bed bugs are pests of significant public health importance, as are mosquitoes, fleas, and other insects.

Integrated pest management (IPM) is the best way to prevent and eliminate pests while preventing unnecessary occupant inhalation and ingestion of poisonous pesticide chemicals. Total release foggers are ineffective as methods in controlling most pests, often counteract less toxic strategies, and can result in resident exposure to toxic chemical agents, and if misused can cause fires, other destruction of property, and loss of life.

Certified pest management professionals (PMPs) with knowledge and experience of IPM, and other individuals trained in IPM, can be critical resources for buildings owners and managers.

References:

- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). Healthy home rating system—Operating guidance. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
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- City and County of San Francisco. (2013). Pest prevention by design guidelines. Retrieved from <http://www.sfenvironment.org/download/pest-prevention-by-design-guidelines>
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7. CHEMICAL AND RADIOLOGICAL AGENTS

7.1. General Requirements.

Requirement:

All chemical and radiological agents in dwellings, premises, and accessory structures, including but not limited to deteriorated lead-based paint, friable asbestos-containing material, formaldehyde, volatile organic compounds, radon, pesticides, and methamphetamine, shall be contained, stored, removed, or mitigated in a safe and healthy manner consistent with federal, state, and local laws and regulations. When an applicable regulatory limit is more protective than the level included in this section, the more restrictive limit shall apply.

7.2. Lead-Based Paint.

Requirement:

7.2.1. Lead levels at or above federal regulatory limits pursuant to 40 C.F.R. § 745.65 are deemed hazardous: (1) lead-based paint on an existing painted surface—0.5 percent by weight or 1.0 milligrams per square centimeter; (2) dust on floors—40 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—250 $\mu\text{g}/\text{ft}^2$; (4) dust on window troughs (wells)—400 $\mu\text{g}/\text{ft}^2$; (5) bare soil in children's play areas—400 parts per million (ppm) of lead; and (6) bare soil in areas of the yard that are not children's play areas—1,200 ppm.

7.2.2. Painted surfaces shall be maintained intact. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), deteriorated paint at a property built before 1978 shall be repaired in accordance with the renovation requirements of 40 C.F.R. § 745 Subpart E, and the underlying cause of the deterioration shall be corrected.

7.2.3. All renovation, repair, and painting work that disturbs a painted surface in a pre-1978 dwelling shall be performed in accordance with the renovation requirements of 40 C.F.R. § 745, Subpart E, unless the paint has been tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a). Dust clearance testing shall be performed at the conclusion of renovation work.

7.2.4. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), a painted surface shall not be disturbed using methods that involve (1) open-flame burning or torching or operating a heat gun at temperatures above a maximum of 1,100° F (593° C); or (2) power sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting unless such machines have shrouds or containment systems and a High-Efficiency Particulate Air (HEPA) vacuum attachment that collects dust and debris at the point of generation. The shroud or containment system shall release no visible dust or air outside the shroud or containment system.

7.2.5. Lead-based paint shall not be applied to the interior or exterior surface of any dwelling or dwelling unit.

✓ Stretch Provision:

- Lead present at or above the following limits is deemed hazardous: (1) lead-based paint on a friction, impact, or chewable surface, damaged or otherwise deteriorated, or non-intact—0.06 percent by weight; (2) dust on floors—10 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—100 $\mu\text{g}/\text{ft}^2$; and (4) 40 $\mu\text{g}/\text{ft}^2$ on porches.

Rationale:

Lead is a heavy metal that accumulates in the body when ingested and has toxic effects on the nervous system, cognitive development, and blood-forming systems and numerous other systems production. Sources of lead include lead-based paint and the dust it generates, soil, drinking water, and consumer and other products. Lead-contaminated soil may be found particularly around older buildings contaminated by flaking external paintwork, adjacent to industrial premises using (or previously having used) lead, and near busy roads from the exhaust fumes from leaded gasoline. Lead is readily absorbed from the intestinal tract, especially in children, and its absorption is enhanced by dietary deficiency of iron and calcium.

Even with relatively low levels of lead in blood, studies show effects on a child's nervous and other systems. The highest risk group is young children aged 0-5 years, because of lead's potential effect on neurological development

and because physiologically they take up lead more readily. Pregnant women and their babies are at risk since lead can pass through the placental barrier.

References:

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7.3. Asbestos.

Requirement:

Every owner shall maintain in good repair all asbestos-containing material on the premises. All asbestos-containing material shall be maintained non-friable and free from any defects such as holes, cracks, tears, and/or looseness that may allow the release of fibers into the environment.

7.3.1. Friable asbestos-containing material shall be abated by licensed asbestos professionals in accordance with federal, state, or local requirements.

7.3.2. Any renovation, demolition, or other activity that will disturb asbestos-containing materials shall be preceded by asbestos abatement performed by certified asbestos professionals in accordance with federal, state, or local requirements.

7.3.3. Abatement, removal, and disposal of all asbestos-containing material shall comply with all appropriate federal, state, and local requirements.

Rationale:

Exposure to asbestos increases the risk of developing lung disease. Disease symptoms may take many years to develop following exposure. Asbestos products were historically used extensively in building materials. Vermiculite insulation in homes may be contaminated with asbestos. A mine near Libby, Montana was the source of over 70 percent of all vermiculite sold in the United States from 1919 to 1990. There was also a deposit of asbestos at that mine, so the vermiculite from Libby was contaminated with asbestos. Vermiculite from Libby was used in the majority of vermiculite insulation in the United States and was often sold under the brand name Zonolite. Vermiculite insulation should be assumed to be contaminated with asbestos and should not be disturbed. Trained professionals must be hired to remove vermiculite insulation. Many asbestos-containing materials continue to be legal to sell and to use. Intact asbestos is not a hazard; it becomes a hazard when it is damaged or deteriorated and releases friable asbestos. The EPA and most states certify or license asbestos inspectors.

References:

- Agency for Toxic Substances and Disease Registry. (2001). Public health statement for asbestos. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved from: <http://www.atsdr.cdc.gov/toxprofiles/phs61.html>
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7.4. Toxic Substances in Manufactured Building Materials

Requirement:

7.4.1. Building materials consisting of hardwood plywood, medium-density fiberboard, and particleboard as defined by 15 U.S.C. 2697(b)(2) shall not be used in maintenance and renovations within dwellings, unless the materials have been certified to meet the formaldehyde emission standards of 15 U.S.C. 2697(b)(2):

- (1) Hardwood plywood with a veneer core, 0.05 parts per million (ppm);
- (2) Hardwood plywood with a composite core, 0.05 ppm;
- (3) Medium-density fiberboard, 0.11 ppm;
- (4) Thin medium-density fiberboard, 0.13 ppm; and
- (5) Particleboard, 0.09 ppm.

7.4.2. Building materials used in maintenance and renovations, including but not limited to paints, coatings, primers, glues, resins, adhesives, and floor coverings, shall be certified as having no volatile organic chemicals (VOCs) or low VOC emissions, and having no halogenated flame retardants (HFRs).

Rationale:

Formaldehyde is a prominent VOC found in household and construction products. It is a colorless, strong-smelling gas that can cause watery eyes; burning sensations in the eyes, nose, and throat; nausea; coughing; chest tightness; wheezing; skin rashes; and allergic reactions. Laboratory animal studies have revealed that formaldehyde can cause cancer in animals. Formaldehyde is classified by the World Health Organization as a known human carcinogen. The most significant source of formaldehyde in homes has been pressed wood products made using adhesives that contain urea formaldehyde (UF) resins. These products include particleboard (used as subflooring and shelving and in cabinetry and furniture), hardwood plywood paneling (used for decorative wall covering and used in cabinets and furniture), and medium-density fiberboard (used for drawer fronts, cabinets, and furniture tops). Medium-density fiberboard contains a higher resin-to-wood ratio than any other UF pressed wood product and is generally recognized as being the highest formaldehyde-emitting pressed wood product.

Pending EPA regulations will implement the Formaldehyde Standards for Composite Wood Products Act to limit formaldehyde emissions from composite wood products and finished goods that contain composite wood products in the U.S. The World Health Organization has recommended a short-term (30-minute) indoor formaldehyde exposure guideline of 0.1 mg/m³ to prevent sensory irritation in the general population.

Interior paints and primers, glues, and adhesives may release VOCs, particularly when drying. Exposure to individual VOCs and mixtures of VOCs can cause or aggravate health conditions, including allergies, asthma, and irritation of the eyes, nose, and airways; however, no health-based standards for indoor non-occupational exposure have been set.

Halogenated flame retardants (HFRs) used in fabrics, foams, and various plastics disrupt thyroid and estrogen hormones, which can cause developmental effects, such as permanent changes to the brain and to reproductive systems (including reduced sperm count in males and changes to ovarian cell structure in females).

References:

- Enterprise Communities Partners. (2011). Enterprise green communities criteria. Retrieved from <http://www.enterprisecommunity.com/servlet/servlet.FileDownload?file=00Pa000000FxxvNEAR>
- Formaldehyde Emission Controls for Certain Wood Products. 24 C.F.R. § 3280.308. (1984).
- Formaldehyde Standards for Composite Wood Products Act. 15 U.S.C. § 2697. (2010).
- National Cancer Institute. (n.d.). Formaldehyde and cancer risk. Retrieved from <http://www.cancer.gov/cancertopics/factsheet/Risk/formaldehyde>
- National Toxicology Program. (2011, June). Report on carcinogens, twelfth edition. Department of Health and Human Services, Public Health Service. Retrieved from <http://ntp.niehs.nih.gov/go/roc12>
- Offerman, F. (2009, November). Ventilation and indoor air quality in new homes. California Air Resources Board and California Energy. Retrieved from <http://www.arb.ca.gov/research/apr/past/04-310.pdf>

- State of California. (2007). Airborne toxic control measures (ATCM) to reduce formaldehyde emissions from composite wood products. California Code of Regulations, Title 17, §§ 93120-92120.12. Retrieved from <http://www.arb.ca.gov/regact/2007/compwood07/fro-final.pdf>
- U.S. Consumer Product Safety Commission. (2013). An update on formaldehyde: 2013 revision. Bethesda, MD: Author. Retrieved from <http://www.cpsc.gov/PageFiles/121919/AN%20UPDATE%20ON%20FORMALDEHYDE%20final%200113.pdf>
- U.S. Environmental Protection Agency. (2013). Formaldehyde emissions from composite wood products. Retrieved from <http://www.epa.gov/oppt/chemtest/formaldehyde/>
- World Health Organization Regional Office for Europe. (2010). WHO guidelines for indoor air quality: Selected pollutants. Copenhagen: Author. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf

Resources:

- Collaborative for High Performance Schools. (n.d.). High performance products database. Retrieved from <http://www.chps.net/dev/Drupal/node/445>
- Underwriters Laboratories. (n.d.). Greenguard certification from UL Environment: Healthier schools. Retrieved from <http://greenguard.org/en/HealthierSchools.aspx>
- Green Seal. (n.d.). Find green products and services. Retrieved from <http://www.greenseal.org/FindGreenSealProductsAndServices.aspx>
- Healthy Building Network. (n.d.). <http://www.healthybuilding.net/>
- Master Painters Institute. (2010, January). MPI introduces "Extreme Green™" paint standard. Retrieved from http://www.paintinfo.com/MPInews/ExtremeGreen_Jan2010.shtml
- Scientific Certification Systems. (2007, May). SCS-EC10.2-2007: Environmental certification program: Indoor air quality performance. Retrieved from <http://www.scs-certified.com/docs/SCS-EC10.2-2007.pdf>

7.5. Radon.

Requirement:

Radon present at levels at or above the EPA action level of four picocuries radon per liter of air (pCi/L) in the lowest habitable level of the dwelling shall be deemed hazardous. Radon levels shall be determined by an approved testing method in accordance with state and local requirements. Radon levels exceeding four pCi/L shall be mitigated by a qualified radon mitigation professional who meets state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

✓ Stretch Provision:

- Radon present at levels at or above two pCi/L in the lowest habitable level of the dwelling shall be deemed hazardous. Radon determined by an approved testing method to exceed two pCi/L shall be mitigated by qualified radon mitigation professionals in accordance with state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

Rationale:

The U.S. Environmental Protection Agency (EPA) estimates that about 21,000 lung cancer deaths each year in the U.S. are radon-related. Exposure to radon is the second-leading cause of lung cancer after smoking. Radon is an odorless, tasteless, and invisible gas produced by the decay of naturally occurring uranium in soil and water. Radon decays rapidly and the resulting products quickly attach themselves to particles in the air. If these particles are inhaled, they can be deposited in the lungs, where the process of radioactive decay continues. The particles emitted can cause cells lining the lungs to mutate genetically and initiate cancer or facilitate a process already initiated by other carcinogens. The risk related to radon increases with dose and duration of exposure. The highest risk is for smokers. As radon is soluble in water, it can be ingested, resulting in the organs of the gastrointestinal

tract receiving the largest dose. EPA has established a recommended maximum exposure level of four pCi/L in occupied areas. Approximately one in 15 homes nationwide has radon above this level.

References:

- American Association of Radon Scientists and Technologists, Inc. (n.d.). National radon proficiency program. Retrieved from <http://nrpp.info/>
- American Association of Radon Scientists and Technologists, Inc. (2012). ANSI-AARST standard: Protocol for conducting radon and radon decay product measurements in multifamily buildings (MAMF-2012). Retrieved from http://www.aarst.org/standards/messages/296/AARST_MAMF_DraftClean_06-09opt-2127.pdf
- National Radon Safety Board. (n.d.). Certified radon professionals. http://www.nrsb.org/find_a_professional.asp
- U.S. Department of Health and Human Services Press Office. (2005, January 13). Surgeon General releases national health advisory on radon. [Press release.] Retrieved from <http://www.surgeongeneral.gov/news/2005/01/sg01132005.html>
- U.S. Environmental Protection Agency, Office of Radiation and Indoor Air. (2003, June). EPA assessment of risks from radon in homes (EPA Publication No. 402-R-03-003). Washington, DC: U.S. Environmental Protection Agency. Retrieved from <http://www.epa.gov/radiation/docs/assessment/402-r-03-003.pdf>
- U.S. Environmental Protection Agency. (2013). Radon (Rn). Retrieved from <http://www.epa.gov/radon/index.html>
- U.S. Environmental Protection Agency. (2013). Radon (Rn): Where you live. Retrieved from <http://www.epa.gov/radon/whereyoulive.html>

7.6. Pesticides.

Requirement:

Pesticides shall only be used in accordance with IPM methods discussed in Section 6.3, using the least toxic pesticide with demonstrated efficacy for the identified pest.

7.6.1. Pesticides shall be applied only in areas and at concentrations which comply with manufacturer specifications. When it is determined by an approved method that a hazardous amount of a pesticide has been applied in a location or at a concentration contrary to manufacturer specifications, the hazard shall be immediately mitigated.

7.6.2. Pesticides shall be stored and disposed in accordance with manufacturer specifications.

Rationale:

The health effects of pesticides vary with the product, but most products affect the eyes, noses, and throats. More severe consequences, such as central nervous system and kidney damage and increased cancer risk, are possible. An EPA survey revealed that bathrooms and kitchens are areas in the home most likely to have improperly stored pesticides. In the United States, EPA regulates pesticides under the pesticide law known as the Federal Insecticide, Fungicide, and Rodenticide Act. Since 1981, this law has required most residential-use pesticides to bear a signal word, such as "danger" or "warning," and to be contained in child-resistant packaging. This type of packaging is designed to prevent or delay access by most children under the age of five years.

References:

- National Pesticide Information Center. (n.d.). www.npic.orst.edu.
- U.S. Environmental Protection Agency. (n.d.). An introduction to indoor air quality (IAQ): Pesticides. Retrieved from <http://www.epa.gov/iaq/pesticid.html>

7.7. Methamphetamine.

Requirement:

A dwelling that has been used for methamphetamine manufacture shall be vacated until certified by an approved testing method as safe from hazardous materials related to the methamphetamine manufacturing process.

Rationale:

Homes formerly used as methamphetamine labs put residents, especially children, at serious health risk. Methamphetamine can be inhaled or absorbed through the skin. Effects resulting from acute exposures include cough; headache; chest pain; burns to skin, eyes, nose, and mouth; shortness of breath; dizziness; pulmonary edema; coma; and death. Exposure over a longer period can lead to liver and kidney damage, neurological problems, and an increased risk of cancer.

References:

- American Academy of Pediatrics Council on Environmental Health. (2012). Drug (methamphetamine) laboratories. In R. A. Etzel (Ed.), *Pediatric Environmental Health*, 3rd edition. (pp. 737–748). Elk Grove Village, IL: American Academy of Pediatrics.
- Minnesota Department of Health. (2013). Methamphetamine and meth labs: What are the potential health effects from exposure to a meth lab? Retrieved from <http://www.health.state.mn.us/divs/eh/meth/lab/potenteffects.html>
- U.S. Centers for Disease Control and Prevention. (2000, November 17). Public health consequences among first responders to emergency events associated with illicit methamphetamine laboratories—Selected states, 1996–1999. *Morbidity and Mortality Weekly Report* 49(45) (CDC Publication No. 2001-633-173/48011 Region IV). Washington, DC: U.S. Government Printing Office. Retrieved from http://www.atsdr.cdc.gov/hs/hsees/Horton_MethLabs.pdf

7.8. Smoke in Multifamily Housing.

Requirements:

7.8.1. Smoking shall be prohibited in all indoor common areas of multifamily buildings.

7.8.2. Smoking shall be prohibited in exterior areas less than 25 feet (762 cm) from building entrances, outdoor air intakes, and operable windows.

7.8.3. Tenants and prospective tenants shall be informed in writing of any applicable smoke-free policy and the location of designated smoke-free and smoking areas. Signs shall be posted in all designated areas.

7.8.4. Tenants who terminate a lease early due to incursion of tobacco smoke or the inception of a smoke-free policy shall be exempt from early termination penalties or security deposit forfeiture.

✓ Stretch Provisions:

- A property-wide policy shall be established in consultation with current tenants to designate exterior common areas where smoking shall be prohibited and areas where smoking shall be permitted.
- A property-wide policy shall be established in consultation with current tenants to designate dwelling units where tobacco smoking shall be prohibited.

Rationale:

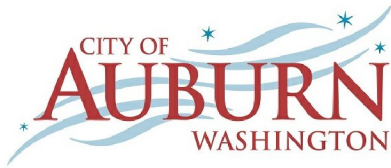
Tobacco smoke contains more than 7,000 chemicals, including hundreds that are toxic and approximately 70 carcinogens, such as arsenic, formaldehyde, benzene, and vinyl chloride. After smoking and radon, secondhand smoke exposure is the third-leading cause of lung cancer death. Secondhand smoke (SHS) also causes numerous health problems in infants and children, including asthma attacks, respiratory infections, ear infections, and sudden infant death syndrome (SIDS). In addition, tobacco smoking is the leading cause of fatal residential fires in the U.S. The U.S. Surgeon General has concluded that there is no safe level of exposure to SHS. Also, experts have concluded that the only way to effectively prevent the migration of SHS from the units of smokers to common areas and the units of nonsmokers is to prohibit all smoking within the building. A study in the United Arab Emirates found that incense smoke emits carbon monoxide, oxides of nitrogen, formaldehyde and carbonyls, and that incense smoke exposure causes significant lung cell inflammation. Studies show that thirdhand smoke clings to hair, skin, clothes, furniture, drapes, walls, bedding, carpets, dust, vehicles, and other surfaces, even long after smoking has stopped. Infants, children, and nonsmoking adults may be at risk of tobacco-related health problems when they inhale, ingest, or touch substances containing thirdhand smoke. Thirdhand smoke is a relatively new concept, and researchers are still studying its possible dangers.

References:

- American Cancer Society. (n.d.). Secondhand smoke. Retrieved from <http://www.cancer.org/cancer/cancercauses/tobaccocancer/secondhand-smoke>
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers. (2013). ASHRAE position document on environmental tobacco smoke. Retrieved from https://www.ashrae.org/File%20Library/docLib/About%20Us/PositionDocuments/ASHRAE_PD_Environmental_Tobacco_Smoke_2013.pdf
- Cohen, R., Sexton, K. G., & Yeatts, K. B. (2013, August 1). Hazard assessment of United Arab Emirates (UAE) incense smoke. *Science of the Total Environment*, 458-460, 176–186.
- Dale, L.. (2012, March 20). What is thirdhand smoke, and why is it a concern? Retrieved from <http://www.mayoclinic.com/health/third-hand-smoke/AN01985>
- U.S. Centers for Disease Control and Prevention. (2011). Fire deaths and injuries: Fact sheet. Retrieved from <http://www.cdc.gov/homeandrecreationalafety/fire-prevention/fires-factsheet.html>
- U.S. Department of Health and Human Services, Office on Smoking and Health (U.S.). (2006). The health consequences of involuntary exposure to tobacco smoke: A report of the Surgeon General. Atlanta, GA: U.S. Centers for Disease Control and Prevention. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK44324/>

MULTI-FAMILY INSPECTION FORM		BUS. LIC. #		License Posted ACC 5.22.070A		☐ Yes ☐ No 1 point	
Address				Inspection Date			
Year Built		# Buildings		# Units			
Utilities Connected ☐ Yes ☐ No		Occupied ☐ Yes ☐ No		Rent Range			
Training ☐ Signed Up ☐ Completed ☐ Not Completed				After Hours Phone			
Owner		Manager		Management Company			
Name		Name		Name			
Email		Email		Email			
Phone		Phone		Phone			
Structure(s)				Total Category Points			
Awnings IPMC 304.1.1 Unsafe Conditions #11; 304.9 Overhang Extensions ☐ Torn ☐ Stained ☐ Rusty ☐ Faded ☐ Good Condition ☐ Water or Wind Damaged ☐ N/A 1 point		Overhangs IPMC 304.1.1 Unsafe Conditions #11; 304.9 Overhang Extensions ☐ Rotted ☐ Moss-covered ☐ Rusty ☐ Peeling ☐ Stained ☐ Faded ☐ Good Condition 1 Point					
Entry IPMC 702 Means of egress; 304.10 stairways, decks, porches and balconies ☐ Obstructed ☐ Dark ☐ Not inviting ☐ Appears dangerous ☐ Well-lit ☐ Clear pathway ☐ Easy to identify 1 Point; 2 or more checked = 2 Points		Roof IPMC 304.1.1 Unsafe Conditions #8 ☐ Rotted ☐ Holes ☐ Evidence of leaking ☐ Loose shingles or tar paper ☐ Moss/debris covered ☐ Good ☐ Uncertain 1 Point; 2 or more checked = 2 Points					
Downspouts/ Gutters IPMC 304.7 Roofs and Drainage ☐ Damaged ☐ Missing ☐ Standing water ☐ Evidence of leaking ☐ Unusual moisture ☐ Uncertain ☐ Good Condition 1 Point		Stairs/Handrails IPMC 304.1.1 Unsafe Conditions #12; 304.10 Stairways, Decks, Porches & Balconies; 304.12 Handrails ☐ Unsafe condition ☐ Rotted ☐ Broken ☐ Loose ☐ Good Condition ☐ N/A 1 Point; 2 or more checked = 2 Points					
Doors/Windows IPMC 304.13 Windows, Skylights and Doorframes; 304.13.1 Glazing; 304.13.2 Openable Window; 304.15 Doors; 304.2 Protective Treatment; 304.18.2 Windows ☐ Sweating ☐ Broken ☐ Not energy efficient ☐ Potential/ or Actual Leaking ☐ Boarded ☐ Plastic covered ☐ Dirty ☐ Good condition Duration of boarding or plastic covered? _____ temp fix vs. long term solution 1 Point; 2 or more checked = 2 Points		Finish IPMC 304.1 General; 304.2 Protective Treatment; 304.6 Exterior Walls ☐ Brick ☐ Tile ☐ Stucco ☐ Wood ☐ Vinyl Siding ☐ Excellent (inviting, feels safe, flawless/pristine exterior, vibrant, commands a presence) ☐ Good (nice building, needs a touch up) ☐ Fair (weathered, needs a face lift) 1 point ☐ Poor/Distressed (needs a make-over or repair, derelict) 2 points					
Exterior Paint IPMC 304.1 General; 304.2 Protective Treatment; 304.6 Exterior Walls ☐ Chipped ☐ Peeling ☐ Faded ☐ Good Condition 1 Point		Rust on Metal IPMC 304.2 Protective Treatment ☐ Yes ☐ No ☐ N/A 1 Point					
Chimney/ Fireplace IPMC 304.11 Chimneys and towers ☐ Unsafe condition ☐ Rotted ☐ Broken ☐ Loose ☐ Good Condition ☐ N/A 1 Point		Lighting acceptable ACC 18.55 ☐ Yes ☐ No ☐ Condition uncertain 1 Point					
License Current ACC 5.10 and ACC 5.22 ☐ Yes ☐ No 1 Point		Graffiti IPMC 302.9 Defacement of Property; ACC 8.13 Graffiti Removal ☐ Yes ☐ No 1 Point If yes, location and content _____ _____					

Exterior Property				Total Category Points	
First Impression/Curb Appeal IPMC 301.1 Scope; 301.2 Responsibility	☐ Excellent (inviting, feels safe, flawless/pristine exterior, vibrant, commands a presence) ☐ Good (nice building, interesting signage, needs a touch up, sterile) ☐ Fair (weathered, needs a face lift) 1 point ☐ Poor (needs a make-over, derelict) 2 points		Sidewalks/Pavement IPMC 302.3 Sidewalks and Driveways	☐ Excellent (pristine condition, fresh paint, stalls well marked, sidewalks level and ADA compliant) ☐ Good (some cracking, paint needs touch up) ☐ Fair (aged, paint weathered, uneven, grass/weeds growing through cracks) 1 point ☐ Poor (potholes, stalls not clearly marked, sidewalk presents a trip hazard) 2 points	
Landscaping/Vegetation well maintained IPMC 302.4 Weeds; ACC 8.20 Vegetation; ACC 18.52.050 Parking Design Standards	☐ Yes ☐ No (vegetation overgrown, weeds present, muddy) ☐ Within acceptable limits for season/time of year (dormant) ☐ Minimal or None ☐ Vehicles parked on unimproved surface 1 point each		Fencing IPMC 302.7 Accessory Structures	☐ Yes ☐ No Condition: ☐ Excellent (pristine condition, fresh paint) ☐ Good (some cracking, paint needs touch up) ☐ Fair (aged, paint weathered, uneven, missing elements) ☐ Poor (needs to be replaced) 1 point	
Junk/Litter/Debris IPMC 304.1 Exterior Structure; ACC 8.12 Public Nuisance; ACC 8.14 Junk and Inoperable Vehicles	Trash, litter, junk & debris ☐ Yes ☐ No Excessive exterior storage ☐ Yes ☐ No Inoperable vehicles ☐ Yes ☐ No Notes: 1 Point; 2 or more checked = 2 Points		Marketing Signs ACC 18.56 Signs	☐ Excellent (inviting, flawless/pristine condition, vibrant, commands a presence) ☐ Good (interesting signage, needs a touch up, sterile) ☐ Fair (weathered, needs a face lift) 1 point ☐ Poor (needs a make-over, derelict) 2 points ☐ N/A	
Portable Signs ACC 18.56 Signs & IPMC 304.3	☐ Yes ☐ No Number: _____ Type: _____ Permit Stickers Present: ☐ Yes ☐ No (If No, contact Gary Yao at 253-288-4301, provide app and info)				
Other				Total Category Points	
Firelanes ACC 10.36 Access-Fire Lane Identification	☐ Yes ☐ No ☐ N/A 1 point FIRE LANE OBSTRUCTED CALL PARKING ENFORCEMENT 253-288-2121		Hydrants Unobstructed ACC 13.12.035 ; ACC 18.31.020; IFC 5.7.5.4 Obstruction	☐ Yes ☐ No ☐ N/A 1 point	
3+ Story Buildings IFC 1103.4 Interior Vertical Openings	☐ Yes (Notify VRFA) ☐ No	5+ Story Buildings IFC 1103.6.1 Standpipe Requirements	☐ Yes (Notify VRFA) ☐ No	Elevators IFC 1103.3 Elevators; IPMC 606.1 elevators, escalator, dumbwaiters	☐ Yes NOTIFY VRFA ☐ No
Permanent Signs/Addressing ACC 15.52 Building numbering; 18.56 Signs; IPMC 304.3 Premise identification	Present ☐ Yes ☐ No Visible ☐ Yes ☐ No Contrasting ☐ Yes ☐ No 1 Point; 2 or more checked = 2 Points		Open Code Enforcement Cases and Police Activity ACC 5.22	Verified code complaints in last 12 months: ☐ Yes ☐ No Number _____ (1 point each) Referred by PD/CRT ☐ Yes ☐ No 3 points	
				Total Points	



AGENDA BILL APPROVAL FORM

Agenda Subject:

Human Services Agency Accomplishments and Site Visit
Reports (Tate) (15 Minutes)

Date:

August 6, 2019

Department:

Community Development

Attachments:

[Human Services Program Report PowerPoint](#)

Budget Impact:

Current Budget: \$0

Proposed Revision: \$0

Revised Budget: \$0

Administrative Recommendation:

Presentation

Background Summary:

The City of Auburn provides funding to organizations, through a competitive application process, to provide critically needed human services to Auburn residents. In the 2019-2020 budget cycle, the City Council allocated \$490,000 per year to agencies funded through this program. With these dollars, the City supports 49 programs across 39 agencies. These programs address food security, physical and mental health, housing and homelessness prevention, youth services, domestic violence, and more. While under contract, agencies must provide the city with quarterly performance reports and undergo regular monitoring. This presentation will provide an mid-year overview of 2019 agency accomplishments, and will highlight trends and program success stories.

Reviewed by Council Committees:

Councilmember: Trout-Manuel

Staff:

Tate

Meeting Date: August 12, 2019

Item Number:

COMMUNITY SERVICES

HUMAN SERVICES MID-YEAR AGENCY ACCOMPLISHMENTS

KYLA WRIGHT AND
JOY SCOTT
CITY COUNCIL STUDY SESSION
AUGUST 12, 2019

Department of Community Development

Planning • Building • Development Engineering • Permit Center
Sustainability • Community Services • Code Enforcement

AUBURN
VALUES

S E R V I C E

E N V I R O N M E N T

E C O N O M Y

C H A R A C T E R

S U S T A I N A B I L I T Y

W E L L N E S S

C E L E B R A T I O N

GENERAL FUND VS CDBG



■ General Fund Human Services dollars

- \$490,000
- Competitive funding for direct service nonprofit agencies
- Guided by Human Services Funding Priorities set by Council
- Approved by City Council every other year during budget process

■ CDBG dollars

- \$595,742*
- Funds support city's Housing Repair program, public facility ADA improvements, public services (limited), and some economic development activities
- Guided by Consolidated Plan and Annual Action Plans
- Approved by City Council every year

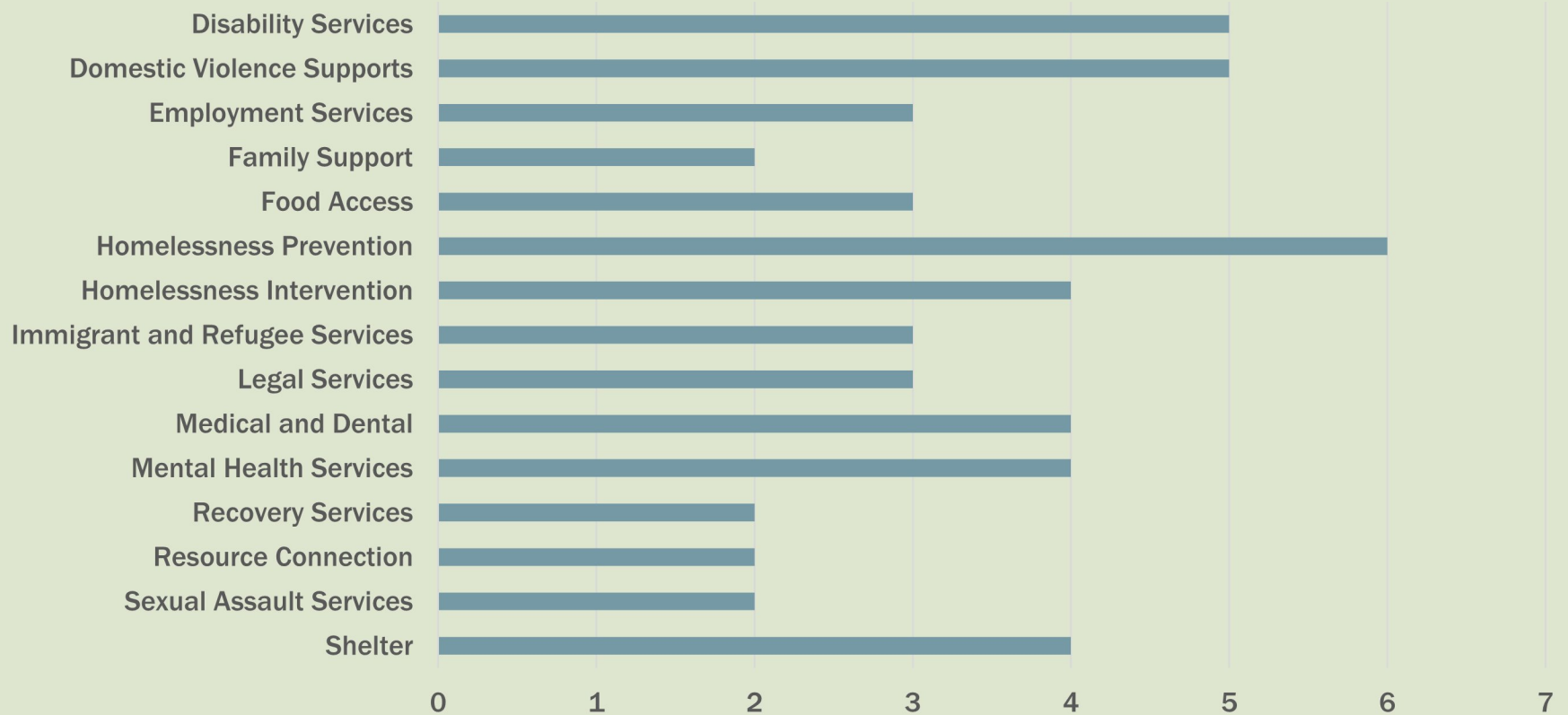
AUBURN'S HUMAN SERVICES PROGRAM

- **\$490,000 Allocated to:**
 - 52 Programs
 - 39 Agencies

- **Programs must:**
 - Serve Auburn residents
 - Meet one of Auburn's Human Services Funding Priorities
 - Submit quarterly reports
 - Undergo program monitoring

2019 FUNDED PROGRAMS

Service Type



YTD AGENCY ACCOMPLISHMENT HIGHLIGHTS

- In January – June 2019, Human Services Agencies provided:
 - 13,472 Bed Nights
 - 2,050 Hours of Case Management
 - 43 Trainings and Workshops
 - 10,939 Meals
 - 359 Hours of Legal Services

2019 HUMAN SERVICES TRENDS

- We continue to see strong provider partnerships and cross collaborations to deliver effective services to Auburn residents
- Affordable housing shortages continues to present housing stability challenges for those experiencing rent increases as well as for those transitioning into permanent housing
- Providers are coming up with resourceful solutions to meet complex needs for Auburn residents
- Procuring employment can be a significant barrier to stability
- Increasing need for rental and utility assistance

AGENCY SITE VISIT

- **Pediatric Interim Care Center (PICC)** continues to provide quality care to infants born experiencing substance withdrawal symptoms. This facility is a unique and critical resource for infants and their families in Auburn and our surrounding cities.



AGENCY SITE VISIT

- **Children's Therapy Center** provides quality therapeutic services designed to empower children with special needs and their families.



HUMAN SERVICES PROGRAM SPOTLIGHT:

MOTHER AFRICA

An Auburn resident was working but her nighttime shift resulted in having to pay a large portion of her income for childcare.

The client approached Mother Africa to help her find another job with hours that would better match with her children's daycare timing.

Together we worked on updating her resume on indeed.com and Glassdoor, we also referred the client to TRAC Associates and employment agencies.

The client requested rental assistance, and we were able to help her to get some resources to help with her rent.

We continued to provide ongoing case management and made referrals to her for a job. In late March, she got a job of Housing Case Manager making \$41,600. This will stabilize her family and help her to move forward in her life in Auburn.

An elderly client residing in Auburn reached out to MSC through the rent line in April requesting assistance with her utility bill.

The client did not have income, as she was no longer eligible for her SSI benefits, which resulted in a high balance being owed before her benefits could be restored.

The MSC staff member was able to assist the customer with her utility bill using Auburn EAP funds, however the customer expressed concern about her rental charges. The customer also has a live-in aide that needed to be added to her household, and the landlord was requiring that the customer pay for a background check/application fee in order to add her to the lease.

Neither the customer nor the aide had the funds to pay for the screening and application fee. MSC staff was able to contact the customer's Section 8 case worker, confirmed what was due, and requested an application for reasonable accommodation to reduce her rent to \$0.

The customer would only be responsible for the apartment charges for water, sewer, and garbage each month. MSC was able to use funds to pay for the screening and application fee as well as her balance toward her May utilities. The customer is applying to receive Aged, Blind or Disabled (ABD) benefits in order to help her pay her utilities going forward.

HUMAN SERVICES PROGRAM SPOTLIGHT:

MULTI- SERVICE CENTER

AT became homeless last year. He lost his job and does not have family or friend supports.

The HOME shelter program helped AT to get stable. He secured a job a few months after staying at the shelter. He has also been working with mental health professionals to address some of his mental health concerns.

Just last month this client moved into an apartment complex. Stephanie the HOME case manager referred AT to the Diversion program through Coordinated Entry for All which helped AT with his security deposit.

AT come back and connected with us to let us know he's been doing great. Because of our partnership with St. Vincent DePaul, we were able to supply AT with a furniture voucher to get a bed for his new place.

HUMAN SERVICES PROGRAM SPOTLIGHT:

CATHOLIC COMMUNITY SERVICES- HOME/ WHOME

QUESTIONS?

Kyla Wright

Human Services Program Coordinator

253-931-3096

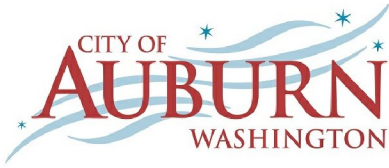
kwright@auburnwa.gov

Joy Scott

Community Services Manager

253-876-1965

jfscott@auburnwa.gov



AGENDA BILL APPROVAL FORM

Agenda Subject:

Matrix

Date:

August 7, 2019

Department:

Administration

Attachments:

[Special Focus Area Key](#)

[Matrix](#)

Budget Impact:

Current Budget: \$0

Proposed Revision: \$0

Revised Budget: \$0

Administrative Recommendation:**Background Summary:****Reviewed by Council Committees:****Councilmember:**

Meeting Date: August 12, 2019

Staff:

Item Number:

SPECIAL FOCUS AREAS

COMMUNITY WELLNESS	FINANCE, TECHNOLOGY, & ECONOMIC DEVELOPMENT	PUBLIC WORKS & COMMUNITY DEVELOPMENT	MUNICIPAL SERVICES
PUBLIC HEALTH AND WELLNESS COMMUNITY & NEIGHBORHOOD SERVICES HOMELESSNESS & HOMELESSNESS PREVENTION HOUSING QUALITY, AFFORDABILITY & ATTAINABILITY HUMAN & SOCIAL SERVICES DOMESTIC VIOLENCE SERVICES COMMUNITY EQUITY	EQUIPMENT RENTAL FACILITIES INNOVATION & TECHNOLOGY CITY REAL PROPERTY BUSINESS DEVELOPMENT SISTER CITIES INTERNATIONAL	UTILITIES TRANSPORTATION SUSTAINABILITY ENVIRONMENTAL PROTECTION CULTURAL ARTS & PUBLIC ARTS PLANNING & ZONING PERMITS & DEVELOPMENT RIGHT OF WAY MANAGEMENT AIRPORT AIRPORT BUSINESS	POLICE SCORE JAIL DISTRICT COURT PARKS & RECREATION ANIMAL CONTROL SOLID WASTE EMERGENCY PLANNING MULTIMEDIA CEMETERY
Councilmember Trout-Manuel, Chair Councilmember DaCorsi, Vice Chair	Councilmember Wales, Chair Councilmember Holman, Vice Chair	Councilmember DaCorsi, Chair Councilmember Baggett, Vice Chair	Councilmember Brown, Chair Deputy Mayor Pelozo, Vice Chair
2019 MEETING DATES February 11, 2019 April 8, 2019 June 10, 2019 August 12, 2019 October 14, 2019 December 9, 2019	2019 MEETING DATES February 25, 2019 April 22, 2019 June 24, 2019 August 26, 2019 October 28, 2019 December 23, 2019	2019 MEETING DATES January 14, 2019 March 11, 2019 May 13, 2019 July 8, 2019 September 9, 2019 November 12, 2019	2019 MEETING DATES January 28, 2019 March 25, 2019 May 27, 2019 July 22, 2019 September 23, 2019 November 25, 2019

COUNCIL MATRIX

NO.	TOPIC	Chair	STAFF LEAD(S)	STUDY SESSION REVIEW DATE(S)	COUNCIL DISCUSSION SUMMARY	ACTION DATE
1	Auburn Avenue Theater	Chair DaCorsi Vice Chair Baggett	Director Faber	9/9/2019		
2	Vision 2050 PSRC	Chair DaCorsi Vice Chair Baggett	Director Tate	9/9/2019		
3	Metro Bus Barn Site	Chair DaCorsi Vice Chair Baggett	Director Gaub Director Tate	TBD		
4	Funding Options	Chair Wales Vice Chair Holman	Director Thomas	Ongoing		
5	Mandatory City Housing Inspections	Chair Trout-Manual Vice Chair DaCorsi	Director Tate	8/12/2019		
6	No Smoking or Vaping in City Parks	Chair Brown Vice Chair Pelozo	Chief Pierson Director Faber	TBD		
7	Fireworks Update	Chair Brown Vice Chair Pelozo	Chief Pierson	TBD		