816 Second Ave, Suite 200, Seattle, WA 98104
p. (206) 343-0681
futurewise.org

October 26, 2021

Mr. Stephen Pohl, Chair
Spokane County Planning Commission
Spokane County Department of Building and Planning
1026 W. Broadway Ave.
Spokane, Washington 99260

Dear Chair Pohl and Planning Commissioners:

Subject: Spokane County Comprehensive Plan Amendment 21-CPA-04 and Development Regulation Amendment 21-ARP-02 allowing wells and onsite septic systems within urban growth areas.
Sent via email to: sneiman@sookanecounty.org; SCHESNEY@SpokaneCounty.org; JPILGRIM@spokanecounty.org

Futurewise works throughout Washington State to support land-use policies that encourage healthy, equitable and opportunity-rich communities, and that protect our most valuable farmlands, forests, and water resources. We have members across Washington State including Spokane County.

We recommend that the Planning Commission recommend denial of proposed Comprehensive Plan Amendment 21-CPA-04 and proposed Development Regulation Amendment 21-ARP-02. These amendments violate the Growth Management Act and are poor public policy.

These amendments will allow on-site water and sewer systems within the urban growth area. The highest density allowed using the lot size table in the state regulations for onsite sewage treatment systems is 12,500 square feet or 3.5 dwelling units per acre.[1] Higher minimum lot sizes and lower densities can be required depending on the soil type.[2] If onsite wells are also used, the allowed densities are even lower for most soils.[3] These densities are not urban densities. Densities of seven dwelling units per acre is required to support transit, which is one of the key urban services and a hallmark of urban growth and urban densities.[4] The Growth Management Act, in RCW 36.70A.110(2), requires that "[e]ach urban growth area shall permit urban densities …" Allowing the use of onsite wells and septic systems does not permit urban densities violating state law.

[1] WAC 246-272A-0320 Table X last accessed on October 25, 2021, at: https://apps.leg.wa.gov/WAC/default.aspx?cite=246-272A&full=true and enclosed with this letter.
[2] *Id.*
[3] *Id.*
[4] Boris Pushkarev & Jeffrey Zupan, *Public Transportation and Land Use Policy* p. 30 (Indiana University Press, Bloomington, Indiana, 1977) (public transit use is minimal below a net residential density of seven dwelling units an acre) enclosed with this letter; RCW 36.70A.030(27); RCW 36.70A.030(28).

This is why RCW 36.70A.110(9) only allows not serving an area with sewers during the comprehensive plan's 20 planning period under very limited circumstances. RCW 36.70A.110(9) provides in full that:

> (9) If a county, city, or utility has adopted a capital facility plan or utilities element to provide sewer service within the urban growth areas during the twenty-year planning period, nothing in this chapter obligates counties, cities, or utilities to install sanitary sewer systems to properties within urban growth areas designated under subsection (2) of this section by the end of the twenty-year planning period when those properties:
> (a)(i) Have existing, functioning, nonpolluting on-site sewage systems;
> (ii) Have a periodic inspection program by a public agency to verify the on-site sewage systems function properly and do not pollute surface or groundwater; and
> (iii) Have no redevelopment capacity; or
> (b) Do not require sewer service because development densities are limited due to wetlands, flood plains, fish and wildlife habitats, or geological hazards.

The current twenty-year planning period for the Spokane County Comprehensive Plan is from 2017 through 2037.[5] But proposed Comprehensive Plan Amendment 21-CPA-04 and proposed Development Regulation Amendment 21-ARP-02 do not require that the lots using onsite septic systems must be served by sewers by 2037 unless the requirements of RCW 36.70A.110(9) are met. Again, this violates the Growth Management Act.

The Washington Administrative Code Section, WAC 365-196-320(1)(f), that proposed Comprehensive Plan Amendment 21-CPA-04 and proposed Development Regulation Amendment 21-ARP-02 are patterned after is out of date. WAC 365-196-320 was adopted in 2010.[6] WAC 365-196-320 has not been updated to reflect RCW 36.70A.110(9) which was adopted in 2017.[7]

The Growth Management Act requires urban densities in urban growth areas because poorly planned low density sprawling development results in many adverse impacts on Washington's residents, local governments, and environment.[8] A partial list of the adverse impacts include:

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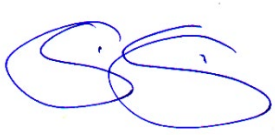
[5] Spokane County Ordinance 2020-0129 Attachment A Planning Commission Recommendation Attachment A Page 3-1.
[6] WAC 365-196-320 last accessed on Oct. 26, 2021, at: https://app.leg.wa.gov/WAC/default.aspx?cite=365-196-320.
[7] *Id.*; Laws of 2017, Ch. 305 § 1 last accessed on Oct. 26, 2021, at: https://lawfilesext.leg.wa.gov/biennium/2017-18/Pdf/Bills/Session%20Laws/House/1683-S.SL.pdf?cite=2017%20c%20305%20%C2%A7%201.
[8] For a comprehensive study of the adverse effects of sprawl see Robert W. Burchell, Naveed A. Shad, David Listokin, Hilary Phillips, Anthony Downs, Samuel Seskin, Judy S. Davis, Terry Moore, David Helton, and Michelle Gall, *The Costs of Sprawl—Revisited* (Transit Cooperative Research Program Report 39, Transportation Research Board, National Research Council 1998) last accessed on Oct. 26, 2021, at: http://www.trb.org/Main/Blurbs/153808.aspx. Also see *Bremerton, et al. v. Kitsap County*, Central Puget Sound Growth Management Hearings Board (CPSGMHB) Consolidated Case No.: 95-3-0039c Corrected Final Decision and Order pp. *17 – *22 (October 6, 1995) (a listing of the adverse effects of sprawl).

- Higher public facility capital and maintenance costs. In a study published in a peer reviewed journal, John Carruthers and Gudmaundur Ulfarsson analyzed urban areas throughout the United States including Spokane County.[9] They found that the per capita costs of most public services declined with density and increased where urban areas were large.[10]
- Higher housing costs and the exclusion of minorities and low-income families.
- More traffic because more people drive alone and must drive longer distances to work and to meet the needs of their families. Sprawling places are likely to have more traffic fatalities per capita than more compact regions due to higher rates of vehicle use.
- Sprawl converts more prime agricultural land from farming to urban uses than more compact forms of development.
- Sprawl destroys more critical areas and other environmentally sensitive areas than compact development. Sprawl results in fish and wildlife habitat losses and habitat fragmentation, the separation of habitats by development. Sprawl's dispersed development pattern leads to the degradation of water quality by increasing runoff volume, altering regular stream flow and watershed hydrology, reducing groundwater recharge, and increasing stream sedimentation. Scientists at the University of Washington have concluded that although impacts on salmon habitat from urbanization occur in a linear fashion, changes to the physical and biological factors necessary for high quality salmon habitat occurs most rapidly when five to ten percent of a river basin is covered by impervious surfaces (roads, buildings, and parking lots).

For these legal and policy reasons, we urge the Planning Commission to recommend denial of proposed Comprehensive Plan Amendment 21-CPA-04 and proposed Development Regulation Amendment 21-ARP-02. Thank you for considering our comments.

If you require additional information, please contact Tim Trohimovich at telephone (206) 343-0681 Ext. 102 or email: tim@futurewise.org.

Very Truly Yours,



Tim Trohimovich, AICP
Director of Planning and Law

Enclosures

[9] John Carruthers and Gudmaundur Ulfarsson, *Urban Sprawl and the Cost of Public Services* 30 ENVIRONMENT AND PLANNING B: PLANNING AND DESIGN 503, 511 (2003) enclosed in a separate email with the filename: "Urban sprawl and the cost of public services.pdf."
[10] *Id.* at 518.

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WAC 246-272A-0320

Developments, subdivisions, and minimum land area requirements.

(1) A person proposing a subdivision where the use of OSS is planned shall obtain a recommendation for approval from the local health officer as required by RCW 58.17.150.

(2) The local health officer shall require the following prior to approving any development:

(a) Site evaluations as required under WAC 246-272A-0220, excluding subsections (3)(a)(i) and (4)(d);

(b) Where a subdivision with individual wells is proposed:

(i) Configuration of each lot to allow a one hundred-foot radius water supply protection zone to fit within the lot lines; or

(ii) Establishment of a one hundred-foot protection zone around each existing and proposed well site;

(c) Where preliminary approval of a subdivision is requested, provision of at least one soil log per proposed lot, unless the local health officer determines existing soils information allows fewer soil logs;

(d) Determination of the minimum lot size or minimum land area required for the development using Method I and/or Method II:

METHOD I. Table X, Single-Family Residence Minimum Lot Size or Minimum Land Area Required Per Unit Volume of Sewage, shows the minimum lot size required per single-family residence. For developments other than single-family residences, the minimum land areas shown are required for each unit volume of sewage. However, the local health officer may require larger lot sizes where the local health officer has identified nitrogen as a concern either through planning activities described in WAC 246-272A-0015 or another process.

TABLE X
Minimum Land Area Requirement
Single-Family Residence or Unit Volume of Sewage

Type of Water Supply	Soil Type (defined by WAC 246-272A-0220)					
	1	2	3	4	5	6
Public	0.5 acre 2.5 acre[1]	12,500 sq. ft.	15,000 sq. ft.	18,000 sq. ft.	20,000 sq. ft.	22,000 sq. ft.
Individual, on each lot	1.0 acre 2.5 acres[1]	1 acre	1 acre	1 acre	2 acres	2 acres

[1]See WAC 246-272A-0234(6).

METHOD II. A minimum land area proposal using Method II is acceptable only when the applicant:

(i) Justifies the proposal through a written analysis of the:

(A) Soil type and depth;

(B) Area drainage, and/or lot drainage;

(C) Public health impact on ground and surface water quality;

(D) Setbacks from property lines, water supplies, etc.;

(E) Source of domestic water;

(F) Topography, geology, and ground cover;

(G) Climatic conditions;

(H) Availability of public sewers;

(I) Activity or land use, present, and anticipated;

(J) Growth patterns;

(K) Reserve areas for additional subsurface treatment and dispersal;

(L) Anticipated sewage volume;

(M) Compliance with current planning and zoning requirements;

(N) Types of proposed systems or designs, including the use of systems designed for removal of nitrogen;

(O) Existing encumbrances, such as those listed in WAC **246-272A-0200** (1)(c)(v) and **246-272A-0220** (2)(a)(vii); and

(P) Estimated nitrogen loading from OSS effluent to existing ground and surface water;

(Q) Any other information required by the local health officer.

(ii) Shows development with public water supplies having:

(A) At least twelve thousand five hundred square feet lot sizes per single-family residence;

(B) No more than 3.5 unit volumes of sewage per day per acre for developments other than single-family residences; and

(iii) Shows development with individual water supplies having at least one acre per unit volume of sewage; and

(iv) Shows land area under surface water is not included in the minimum land area calculation; and

(e) Regardless of which method is used for determining required minimum lot sizes or minimum land area, submittal to the health officer of information consisting of field data, plans, and reports supporting a conclusion the land area provided is sufficient to:

(i) Install conforming OSS;

(ii) Assure preservation of reserve areas for proposed and existing OSS;

(iii) Properly treat and dispose of the sewage; and

(iv) Minimize public health effects from the accumulation of contaminants in surface and groundwater.

(3) The department shall develop guidelines for the application of Method II by (*insert date one year from the effective date*).

(4) The local health officer shall require lot areas of twelve thousand five hundred square feet or larger except when a person proposes:

(a) OSS within the boundaries of a recognized sewer utility having a finalized assessment roll; or

(b) A planned unit development with:

(i) A signed, notarized, and recorded deed covenant restricting any development of lots or parcels above the approved density with the overall density meeting the minimum land area requirements of subsection (2)(d) of this section;

(ii) A public entity responsible for operation and maintenance of the OSS, or a single individual owning the OSS;

(iii) Management requirements under chapter **246-272B** WAC when installing a LOSS; and

(iv) Extinguishment of the deed covenant and higher density development allowed only when the development connects to public sewers.

(5) The local health officer may:

(a) Allow inclusion of the area to the centerline of a road or street right of way in a Method II determination under subsection (2)(d) of this section to be included in the minimum land area calculation if:

(i) The dedicated road or street right of ways are along the perimeter of the development;

(ii) The road or street right of ways are dedicated as part of the proposed development; and

(iii) Lots are at least twelve thousand five hundred square feet in size.

(b) Require detailed plot plans and OSS designs prior to final approval of subdivision proposals;

(c) Require larger land areas or lot sizes to achieve public health protection;

(d) Prohibit development on individual lots within the boundaries of an approved subdivision if the proposed OSS design does not protect public health by meeting requirements of these regulations; and

(e) Permit the installation of an OSS, where the minimum land area requirements or lot sizes cannot be met, only when all of the following criteria are met:

(i) The lot is registered as a legal lot of record created prior to the effective date of this chapter;

(ii) The lot is outside an area identified by the local plan developed under WAC **246-272A-0015** where minimum land area has been listed as a design parameter necessary for public health protection; and

(iii) The proposed system meets all requirements of these regulations other than minimum land area.

(6) The use of a reduced-sized SSAS does not provide for a reduction in the minimum land area requirements established in this section. Site development incorporating reduced-sized SSAS must meet the minimum land area requirements established in state and local codes.

[Statutory Authority: RCW **43.20.050**. WSR 05-15-119, § 246-272A-0320, filed 7/18/05, effective 7/1/07.]

Public Transportation and Land Use Policy

BORIS S. PUSHKAREV

JEFFREY M. ZUPAN

INDIANA UNIVERSITY PRESS / *Bloomington & London*

pay for (which are reported as having been made), while other passengers assignable to suburban service are often reported as intercity. These data deficiencies, however, do not change the broad orders of magnitude shown in Exhibit 2.3, which relates the combined rapid transit and commuter rail ridership in urban areas to the square feet of office space in their major downtown. The office space scale is the same as in the preceding exhibit.

On a logarithmic scale, ridership by rail and rapid transit is shown to be closely related to the amount of downtown office floorspace in Cleveland, Boston, Philadelphia, Chicago, and New York. The two urban areas which fall substantially below the line of averages are San Francisco, where BART was only in partial operation during the year shown, and Newark, for which only trips to the downtown area are listed. Toronto and Montreal show above average rail transit use. On the basis of the relationship shown one can estimate that most U.S. cities building or contemplating new rapid transit systems—cities that have 10 to 30 million square feet of downtown office floorspace—can expect a rapid transit ridership on the order of 15 to 70 million annually under current conditions of auto ownership and use. Only the Washington system can, upon completion, expect to come close to Chicago with some 150 million annual trips, about one eighth of the New York Region's trips.

Ridership by commuter rail has held up quite well over the past decade and a half, and has experienced a significant increase in Philadelphia. Rapid transit ridership has fallen somewhat, with the greatest percentage drop occurring on the smallest system, in Cleveland. In Chicago, ridership losses were offset in part by gains resulting from major system extensions, and the opening of the Lindenwold line in the Philadelphia area more than offset areawide rapid transit losses over the preceding decade. Thus the position of the line of averages in Exhibit 2.3 is subject to change through long-term secular trends, and also depends on the extent of the individual systems.

Returning now to the analysis of Census Journey to Work data, and looking for reasons why the average density of urbanized areas does not say much about transit use, we may note that apart from the different degrees of downtown concentration, and the presence or absence of rail services on exclusive rights of way, there is a third reason. Except for the extremes of the New York portion of the New York-Northeastern New Jersey Urbanized Area and the overbounded urbanized area of Nashville, 103 of the 105 larger urbanized areas investigated fall into the density range of between 1,500 and 5,300 persons per square mile. Referring to the fourth curve in Exhibit 7.1 in the Appendix, we can estimate that this is equivalent to an average areawide residential density of 2.5 to 6.5 dwellings per net acre, certainly not a very wide range. The suburban spread of the last three decades has homogenized American urban areas a great deal, and conceals internal differences in density such as those between Philadelphia and Los Angeles. Had we followed the Census in treating the two parts of the New York-Northeastern New Jersey Urbanized Area as one (which for other purposes they are), the average density of this agglomeration would not have been much above the others—some 6,700 persons per square mile. To find a wider range of densities which can be related to transit use, we must look inside urban areas.

DENSITY WITHIN URBAN AREAS AND THE USE OF TRANSIT

The Area Transportation Studies undertaken in the U.S. mostly in the early 'sixties provide a wealth of data on travel behavior within urban areas. Unfortunately, the rich ex-

perience of these studies has not been sufficiently summarized on a national basis, nor are its lessons widely appreciated. Selected data—condensed for readability—from one of the few studies synthesizing this experience[1] are presented in Exhibit 2.4, along with data based on the Home Interview Survey conducted by the Tri-State Regional Planning Commission in 1963 in the New York Region.

In the exhibit, both total weekday trips per person by all vehicular modes and weekday trips per person by public transportation are plotted against the density of the residential area in which the person making the trips lives. In contrast to the small variation in density presented earlier, the variation here is very large—from 0.8 dwellings per acre all the way to 200 dwellings per acre. The differences in travel demand are, accordingly, also very dramatic.

The average individual living on a 1-acre lot in one of the six urban areas shown—ranging in size from Springfield, Mass. (population 531,000), to the New York Region (population 16,300,000 within the survey area)—made anywhere from 2.0 to 2.6 trips by all vehicular modes on an average weekday. His or her propensity for making trips did not change much if the density increased to 3 dwellings per acre. However, as the density increased from 3 to 30 dwellings per acre, the number of trips per person was reduced anywhere from 50 percent in Springfield and Milwaukee to 16 percent in Seattle, with the New York Region about in the middle with a 30 percent reduction in total trips, very similar to Boston. This reduction in total travel demand was due to a reduction of trips by auto. Transit trips, by contrast, increased even more dramatically with rising density.

At a density of around 1 dwelling per acre, the transit demand in any one of the six urban agglomerations was minimal—anywhere from 0.01 to 0.14 trips by public transportation per person per day. This demand did not increase much up to a density of 7 dwellings per acre, where it amounted to 0.03 to 0.22 trips by public transportation per day. However, with a density increase from 7 to 30 dwellings per acre, transit demand roughly tripled in the New York Region, in Philadelphia, and in Boston, to around 0.6 trips per person per day. In the three smaller urban areas, the absolute number of trips per person by public transportation at a density of 30 dwellings per acre was not as high, but the relative increase compared to the lower density was even greater.

Densities above 30 dwellings per acre are not frequent in American cities; in the three larger urban areas shown, transit trips per person continue to increase in this high density range, but at a declining rate. At a density of roughly 50 dwellings per acre, transit trips become more numerous than auto trips in the New York Region and Philadelphia; at a density of 85 dwellings per acre or more in New York, reductions in total travel demand by mechanical means appear to cease, even though transit travel continues to increase.

Summarizing, we find that *densities in the 2 to 7 dwellings per acre range produced only marginal use of public transportation* within major urban areas of the United States in the early 'sixties. We have seen that the average areawide densities of virtually all urbanized areas in the nation fall into this density range. *Densities of 7 to 30 dwellings per acre were necessary to sustain significant transit use—in the range of 5 to 40 percent of all trips.* Moreover, an increase in density from about 7 to 30 dwellings per acre produced not only a very dramatic increase in transit use, but also a sharp reduction in auto travel.

The general consistency of these patterns notwithstanding, there is still a fair amount

EXHIBIT 2.4 continued

Note: Densities listed represent midpoints of class intervals for which data were available

Source: Wilbur Smith and Associates. *Patterns of Car Ownership, Trip Generation and Trip Sharing in Urbanized Areas.* Prepared for the Bureau of Public Roads, New Haven, Conn., June 1968, p. 107-110, and Tri-State Regional Planning Commission.

* Considering multi-mode trips as one trip by the dominant mode.

EXHIBIT 2.4

Total Trips per Person by Mode Related to Residential Density in Six Urban Areas