

**FAIRFAX COUNTY PLANNING COMMISSION
ENVIRONMENT COMMITTEE MEETING
THURSDAY, FEBRUARY 26, 2009**

COMMITTEE MEMBERS PRESENT:

Walter L. Alcorn, At-Large
Frank A. de la Fe, Hunter Mill District
Jay P. Donahue, Dranesville District
Earl L. Flanagan, Mount Vernon District
James R. Hart, Commissioner At-Large, Chairman
Kenneth A. Lawrence, Providence District

COMMITTEE MEMBER ABSENT:

Timothy J. Sargeant, At-Large

DEPT. OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES STAFF PRESENT:

Michelle Brickner, Director, Land Development Services (LDS)
John Friedman, Director, Code Analysis Division (CAD), LDS
Judith Cronauer, CAD, LDS
Shannon Curtis, Stormwater Planning Division

OTHER STAFF PRESENT:

Noel Kaplan, Planning Division, Department of Planning and Zoning
S. Robin Ransom, Assistant Director, Planning Commission Office
Kara A. DeArrastia, Deputy Clerk to the Planning Commission

OTHERS PRESENT:

Ada Benitez, Student from George Mason University
Laura Giese, Wetland Studies and Solutions, Inc. (WSSI)
Mark Headly, WSSI

ATTACHMENTS:

- (1) February 23, 2009 Board Summary
- (2) PowerPoint Presentation on Riparian Buffers and Next Steps

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Planning Commission Vice Chairman Walter L. Alcorn constituted the meeting at 7:00 p.m. in the Board Conference Room at 12000 Government Center Parkway, Fairfax, Virginia, pursuant to Section 4-102 of the Commission's *Bylaws & Procedures* and indicated that the first order of business was to elect a committee chair.

Commissioner de la Fe MOVED TO ELECT JAMES R. HART AS CHAIRMAN OF THE 2009 ENVIRONMENT COMMITTEE.

Commissioner Lawrence seconded the motion which carried unanimously.

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Commissioner Alcorn MOVED THAT THE ENVIRONMENT COMMITTEE MINUTES OF DECEMBER 10, 2008, BE APPROVED.

Commissioner de la Fe seconded the motion which carried unanimously.

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ENVIRONMENTAL QUALITY CORRIDOR POLICY AND TRADEOFFS

Noel Kaplan, Planning Division, Department of Planning and Zoning, indicated that on February 23, 2009, the Board of Supervisors (BOS) had approved PCA 78-S-063-06 and SE 2008-SU-026 by The Aerospace Corporation. He said the case had raised questions about how the County should deal with trade-offs in Environmental Quality Corridors (EQCs). He explained that at the conclusion of the Aerospace case, BOS Chairman Sharon Bulova had moved that staff, in conjunction with the Planning Commission, Environmental Quality Advisory Council (EQAC), and other stakeholders, conduct a thorough review of the EQC policy to ensure that it remained functional and adhered to the County's environmental preservation and restoration objectives, as shown in Attachment (1). Mr. Kaplan asked for guidance from this Committee on the procedure and timeline he should present to the BOS Environmental Committee on Friday, March 6, 2009.

Mr. Kaplan suggested that the Committee hold a meeting to address the details of this process, such as the scope of work, the schedule, and the role of the stakeholders. He also requested that the Committee take into account the potential impacts on staff resources caused by the proposed FY2010 budget cuts and increased workload.

Chairman Hart said he and Stella Koch, At-Large, Chair of EQAC, agreed that this should be handled similar to the riparian buffer process.

Commissioner Hart presented possible questions for consideration in the EQC policy review:

- Should there be tradeoffs and if so, under what circumstances?
- Are there certain EQCs that are more susceptible to evaluating these tradeoffs?
- What exactly is an appropriate tradeoff?
- Is stream restoration required, or is a certain amount of reforestation required?
- Do financial contributions factor into the tradeoffs?

Commissioner Alcorn recommended that staff consider an overall framework for analyzing tradeoffs to determine the significant net environmental and ecological benefit associated with the tradeoff and establish a system for measuring the ecological services or aspects provided by the EQC property.

Mr. Kaplan commented that the challenge was to determine how to quantify something that was not inherently quantifiable. Commissioner Alcorn said he encouraged staff to consider how to quantify the ecological services provided by EQCs.

Commissioner Lawrence suggested that staff apply the experience gained in working on the riparian buffers project to form an estimate of the number of staff hours needed and the number of staff hours available to complete the EQC policy review. He said these data should be recorded in a "table of experience" to enable staff to derive a realistic time schedule.

In response to a question from Commissioner Donahue, Mr. Kaplan said he would verify whether there were any pending cases that could be impacted by a possible change to the EQC policy.

Commissioner Donahue said he agreed with Commissioner Alcorn's suggestion for quantifying results. He commented that subjective considerations could be based on the specific outcome from the quantifiable formula.

Commissioner de la Fe said he was in general agreement with what the Committee members had said so far. He commented that quantification could have unintended consequences and suggested that each situation be evaluated on its own merits to determine the specific benefits. Chairman Hart suggested that it be made clear that the County was not opening the EQC to development simply due to the provision of tradeoffs, but in recognition of extraordinary or exceptional circumstances under which limited intrusions might be acceptable given significant benefits.

Responding to questions from Commissioner Flanagan, Mr. Kaplan explained that the BOS request for a "thorough review" would focus on the flexibility of the EQC policy to allow for considerations of tradeoffs and that it was not intended as a response to Commissioner Flanagan's broader concern about the difficulties in attaining restoration goals for the Chesapeake Bay. He suggested that no single ordinance or set of regulations would lead to the complete restoration of the Chesapeake Bay and noted that the EQC policy and the Chesapeake Bay Preservation Ordinance were distinct in that they were applied and defined differently.

Commissioner Flanagan commented that the EQC policy review should produce results that could be explained to County citizens in a comprehensive way.

Commissioner Lawrence said he agreed with Chairman Hart's earlier suggestion that tradeoffs not be considered in a given case unless they were triggered by specific extraordinary circumstances. Mr. Kaplan said a baseline assumption to initiate discussion on tradeoffs would need to be identified.

Commissioner Alcorn proposed a five-to-one or ten-to-one replacement value, which would make it difficult for an applicant to meet this type of tradeoff, although extraordinary circumstances could be considered. He also recommended that tradeoffs only be considered in connection with a specified maximum land area of encroachment.

Chairman Hart suggested that staff present to the BOS Environmental Committee a summary of this Committee's general observations on the EQC policy review project.

Referring to the Aerospace case, Chairman Hart asked whether there were other properties in the County where staff had been prevented from mapping the perennial streams on-site. Mr. Kaplan said he would forward this inquiry to the Department of Public Works and Environmental Services (DPWES).

In response to a question from Chairman Hart, Mr. Kaplan noted that he would review the Committee's input, develop questions that would define the scope and direction of the EQC policy review effort, and present his finding to the Committee at its next meeting.

RIPARIAN BUFFERS

Judith Cronauer, Code Analysis Division, Land Development Services (LDS), DPWES, delivered a PowerPoint presentation on riparian buffers, as shown in Attachment (2). She clarified the following issues that had been previously raised by the Committee:

- The County could require wider buffers in specific areas, such as the Water Supply Protection Overlay District, as long as there was a justification like a better water quality benefit.
- If implemented as a Resource Management Area (RMA) requirement, the County could not require reforestation, even if encroachment occurred in the buffer area.
- The performance criteria for RMAs did not apply to development or redevelopment resulting in land disturbances of less than or equal to 2,500 square feet.

Ms. Cronauer reviewed the revised numbers regarding miles of stream protected versus drainage areas and the types of buildings encroaching into a 35-foot wide buffer by drainage area and by watershed.

Ms. Cronauer presented images and described the impacts of certain structures encroaching in the following watersheds:

- Pimmit Run Watershed (High Density)
- Horsepen Creek Watershed (High Density)
- Dogue Creek Watershed (High Density)
- Difficult Run Watershed (Moderate Density)
- Johnny Moore Creek Watershed (Low Density)
- Wolf Run Watershed (Low Density)

Ms. Cronauer reviewed the estimated level of staff effort to implement the riparian buffer regulations, including the hours needed for mapping, review, inspections, and enforcement annually. She pointed out that it would take a significant effort to map all County properties within a 35-foot wide buffer and that one staff member was equivalent to 2,080 annual hours.

Ms. Cronauer presented a synopsis of the workgroup's consensus to-date and the next steps in this process before a decision was made, as listed on the last two slides of the presentation.

Referring to the "Next Steps" slide, Chairman Hart said he hoped that a recommendation would be ready to present to the BOS Environmental Committee by June. He pointed out that the advertising of the proposed riparian buffer regulations should include a range of factors regarding the unresolved issues and that the final decision should incorporate input received from citizens and industry representatives. He commented that some industry representatives and homeowners would probably express reservations about the regulations.

Responding to questions from Commissioner Alcorn, Ms. Cronauer explained that the riparian buffer regulations would be subject to an exception process, similar to the one involving Resource Protection Areas (RPAs), which would permit a developer or homeowner to appeal the regulations. She said, however, that the regulations should not be construed as taking property from homeowners or developers. She noted that any stream with an RPA designation would need to have an associated buffer area at least 100 feet wide along each side of the stream and associated wetland areas.

Commissioner Alcorn expressed concern that many people would be opposed to the new regulations. He recommended that the potential environment improvements be weighed against the difficulty of implementation.

In response to a question from Commissioner Flanagan, Ms. Cronauer said approximately 8,882 properties would be affected by a 10-acre drainage area. John Friedman, Director, Code Analysis Division, LDS, DPWES, pointed out that this figure did not take into account properties encumbered by the RPA. Commissioner Flanagan said it would be valuable to know if the number of affected properties, out of a total of 300,000, would be considered a minimal invasion.

Replying to questions from Commissioner Lawrence, Ms. Cronauer and Shannon Curtis, Stormwater Planning Division, DPWES, explained how potential environmental benefits could be quantified.

Chairman Hart said that in order to persuade industry and landowners of the need to add these regulations, the County should demonstrate the benefits of imposing riparian buffers with convincing scientific evidence. Commissioner Alcorn concurred and said it was important to provide justification for the requirement.

Michelle Brickner, Director, LDS, DPWES, also expressed concern that if the regulations were incorporated into the performance criteria for RMAs, a homeowner or developer filing a building permit could still clear vegetation on the property 2,500 square feet at a time.

Commissioner Alcorn suggested that an alternate plan be developed that would achieve at least as significant environmental outcome in case the current plan was not achievable. Commissioner Lawrence pointed out that an alternative could include other methods of producing best management practices.

Chairman Hart explained that it would be easier to decide the width of the buffer in certain areas if the exact environmental benefit was known.

Commissioner Flanagan said the County needed to be prepared to demonstrate the benefits to impacted property owners. Commissioner Alcorn commented that riparian buffers would be an overall public benefit since they addressed downstream environmental issues.

In response to a question from Chairman Hart, Ms. Cronauer noted that at the next Committee meeting, staff would present more information on quantifiable benefits. Chairman Hart said the Committee should also consider how the regulations should be presented to the citizens and developers, the specific objectives of the regulations and how to achieve them, and the specific benefits of implementing such regulations. Commissioner Alcorn added that the Committee should also compare the benefits and costs of the primary plan with an alternate plan.

Commissioner Alcorn recommended that staff consult with the County Attorney's Office to define the County's authority in the new regulations, the potential outcome, and other ways to achieve reforestation outside of the RMA. Chairman Hart added that staff should also inquire as to whether the County had the authority to require reforestation for other reasons.

Chairman Hart announced that the Committee would meet on April 16 and 30, 2009, at 7 p.m., in the Board Conference Room, and would decide later which meeting would focus on the EQC policy and which meeting would focus on riparian buffers.

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The meeting was adjourned at 8:14 p.m.
James R. Hart, Chairman

An audio recording of this meeting is available in the Planning Commission Office, 12000 Government Center Parkway, Suite 330, Fairfax, Virginia 22035.

Minutes by: Kara A. DeArrastia

Approved: April 16, 2009

Linda B. Rodeffer, Clerk
Fairfax County Planning Commission

Supervisor Frey moved approval of:

- Proffered Condition Amendment Application PCA 78-S-063-06, subject to the proffers dated February 10, 2009.
- Special Exception Application SE 2008-SU-026, subject to the development conditions dated December 31, 2008.
- The addition of development condition #5 to read as follows:
“Ancillary office shall be defined to consist of only satellite office space for tenants whose primary work space is not located within the cellar space with a maximum of 10 percent of the total cellar space devoted to such use.”

Supervisor Herrity seconded the motion, which **CARRIED** by a recorded vote of eight, Supervisor Smyth voting “**NAY.**”

Chairman Bulova relinquished the Chair to Vice-Chairman Gross and moved that the staff, in conjunction with the Planning Commission, Environmental Quality Advisory Commission, and other stakeholders, conduct a thorough review of the EQC policy so that the County has a Policy that remains both functional and true to the spirit of environmental preservation and restoration. The second to this motion was inaudible.

Chairman Bulova asked unanimous consent that the return date for this review be conducted by March 6, 2009. Without objection, it was so ordered.

Supervisor Smyth asked unanimous consent that the Board direct staff to create a process when dealing with perennality. Discussion ensued, with input from Jimmie Jenkins, Director, Department of Public Works and Environmental Services, regarding the addition of the subject of perennality for streams. Without objection, it was so ordered.

The question was called on the motion and it carried by unanimous vote.

Vice-Chairman Gross returned the gavel to Chairman Bulova.

40.

4:30 P.M. – PUBLIC COMMENT FROM FAIRFAX COUNTY CITIZENS AND BUSINESSES ON ISSUES OF CONCERN (9:08 p.m.)

A Certificate of Publication was filed from the editor of the *Washington Times* showing that notice of said public hearing was duly advertised in that newspaper in the issues of February 5 and February 12, 2009.

Citizens and businesses of Fairfax County are encouraged to present their views on issues of concern. The Board will hear public comment on any issue except: issues under litigation, issues which have been scheduled for public hearing

Objective 2: Prevent and reduce pollution of surface and groundwater resources. Protect and restore the ecological integrity of streams in Fairfax County.

Policy a. Maintain a best management practices (BMP) program for Fairfax County and ensure that new development and redevelopment complies with the County's best management practice (BMP) requirements.

Policy b. Update BMP requirements as newer, more effective strategies become available.

Policy c. Minimize the application of fertilizers, pesticides, and herbicides to lawns and landscaped areas through, among other tools, the development, implementation and monitoring of integrated pest, vegetation and nutrient management plans.

Policy d. Preserve the integrity and the scenic and recreational value of stream valley EQCs when locating and designing storm water detention and BMP facilities. In general, such facilities should not be provided within stream valley EQCs unless they are designed to provide regional benefit or unless the EQCs have been significantly degraded. When facilities within the EQC are appropriate, encourage the construction of facilities that minimize clearing and grading, such as embankment-only ponds, or facilities that are otherwise designed to maximize pollutant removal while protecting, enhancing, and/or restoring the ecological integrity of the EQC.

Policy e. Update erosion and sediment regulations and enforcement procedures as new technology becomes available. Minimization and phasing of clearing and grading are the preferred means of limiting erosion during construction.

Policy f. Where practical and feasible, retrofit older stormwater management facilities to perform water quality functions to better protect downstream areas from degradation.

Policy g. Monitor the performance of BMPs.

Policy h. Protect water resources by maintaining high standards for discharges from point sources.

Policy i. Monitor Fairfax County's surface and groundwater resources.

Policy j. Regulate land use activities to protect surface and groundwater resources.

Policy k. For new development and redevelopment, apply better site design and low impact development (LID) techniques such as those described below, and pursue commitments to reduce stormwater runoff volumes and peak flows, to increase groundwater recharge, and to increase preservation of undisturbed areas. In order to minimize the impacts that new development and redevelopment projects may have on the County's streams, some or all of the following practices should be considered where not in conflict with land use compatibility objectives:

- Minimize the amount of impervious surface created.

- Site buildings to minimize impervious cover associated with driveways and parking areas and to encourage tree preservation.
- Where feasible, convey drainage from impervious areas into pervious areas.
- Encourage cluster development when designed to maximize protection of ecologically valuable land.
- Encourage the preservation of wooded areas and steep slopes adjacent to stream valley EQC areas.
- Encourage fulfillment of tree cover requirements through tree preservation instead of replanting where existing tree cover permits. Commit to tree preservation thresholds that exceed the minimum Zoning Ordinance requirements.
- Where appropriate, use protective easements in areas outside of private residential lots as a mechanism to protect wooded areas and steep slopes.
- Encourage the use of open ditch road sections and minimize subdivision street lengths, widths, use of curb and gutter sections, and overall impervious cover within cul-de-sacs, consistent with County and State requirements.
- Encourage the use of innovative BMPs and infiltration techniques of stormwater management where site conditions are appropriate, if consistent with County requirements.
- Apply nonstructural best management practices and bioengineering practices where site conditions are appropriate, if consistent with County requirements.
- Encourage shared parking between adjacent land uses where permitted.
- Where feasible and appropriate, encourage the use of pervious parking surfaces in low-use parking areas.
- Maximize the use of infiltration landscaping within streetscapes consistent with County and State requirements.

Policy l. In order to augment the EQC system, encourage protection of stream channels and associated vegetated riparian buffer areas along stream channels upstream of Resource Protection Areas (as designated pursuant to the Chesapeake Bay Preservation Ordinance) and Environmental Quality Corridors. To the extent feasible in consideration of overall site design, stormwater management needs and opportunities, and other Comprehensive Plan guidance, establish boundaries of these buffer areas consistent with the guidelines for designation of the stream valley component of the EQC system as set forth in Objective 9 of this section of the *Policy Plan*. Where applicable, pursue commitments to restoration of degraded stream channels and riparian buffer areas.

Policy m. Support watershed management planning and consider any watershed management plans that are adopted or endorsed by the Board of Supervisors as a factor in making land use decisions.

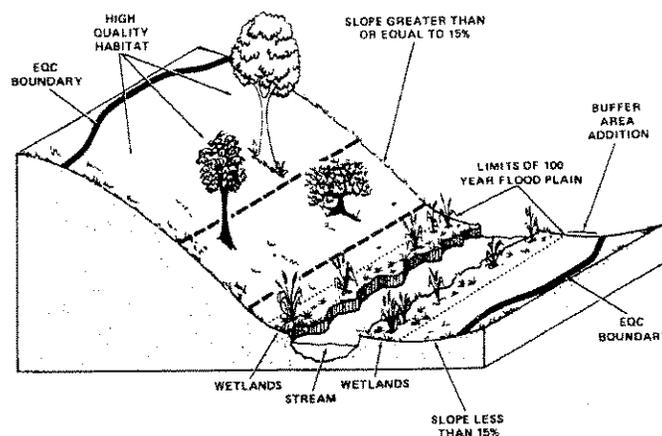
addition, natural vegetation and stream valleys have some capacity to reduce air, water and noise pollution.

Objective 9: Identify, protect and enhance an integrated network of ecologically valuable land and surface waters for present and future residents of Fairfax County.

Policy a: For ecological resource conservation, identify, protect and restore an Environmental Quality Corridor system (EQC). (See Figure 4.) Lands may be included within the EQC system if they can achieve any of the following purposes:

- **Habitat Quality:** The land has a desirable or scarce habitat type, or one could be readily restored, or the land hosts a species of special interest.
- **"Connectedness":** This segment of open space could become a part of a corridor to facilitate the movement of wildlife.
- **Aesthetics:** This land could become part of a green belt separating land uses, providing passive recreational opportunities to people.
- **Pollution Reduction Capabilities:** Preservation of this land would result in significant reductions to nonpoint source water pollution, and/or, micro climate control, and/or reductions in noise.

The core of the EQC system will be the County's stream valleys. Additions to the stream valleys should be selected to augment the habitats and buffers provided by the stream valleys, and to add representative elements of the landscapes that are not represented within stream valleys. The stream valley component of the EQC system shall include the following elements (See Figure 4):



A TYPICAL ENVIRONMENTAL QUALITY CORRIDOR

Source: Fairfax County Office of Comprehensive Planning

FIGURE 4

- All 100 year flood plains as defined by the Zoning Ordinance;
- All areas of 15% or greater slopes adjacent to the flood plain, or if no flood plain is present, 15% or greater slopes that begin within 50 feet of the stream channel;
- All wetlands connected to the stream valleys; and
- All the land within a corridor defined by a boundary line which is 50 feet plus 4 additional feet for each % slope measured perpendicular to the stream bank. The % slope used in the calculation will be the average slope measured within 110 feet of a stream channel or, if a flood plain is present, between the flood plain boundary and a point fifty feet up slope from the flood plain. This measurement should be taken at fifty foot intervals beginning at the downstream boundary of any stream valley on or adjacent to a property under evaluation.

Modifications to the boundaries so delineated may be appropriate if the area designated does not benefit habitat quality, connectedness, aesthetics, or pollution reduction as described above. In addition, some intrusions that serve a public purpose such as unavoidable public infrastructure easements and rights of way are appropriate. Such intrusions should be minimized and occur perpendicular to the corridor's alignment, if practical.

Preservation should be achieved through dedication to the Fairfax County Park Authority, if such dedication is in the public interest. Otherwise, EQC land should remain in private ownership in separate undeveloped lots with appropriate commitments for preservation. The use of protective easements as a means of preservation should be considered.

When preservation of EQC land is achieved through the development process it is appropriate to transfer some of the density that would otherwise have been permitted on the EQC land to the non-EQC portion of the property to provide an incentive for the preservation of the EQC and to achieve the other objectives of the Plan. The amount of density transferred should not create an effective density of development that is out of character with the density normally anticipated from the land use recommendations of the Plan. For example, town homes should not normally be built adjacent to an EQC in an area planned for two to three dwelling units per acre. Likewise, an increase in the effective density on the non EQC portion of a site should not be so intense as to threaten the viability of the habitat or pollution reduction capabilities that have been preserved on the EQC portion of the site.

- Policy b. To provide an incentive for the preservation of EQCs while protecting the integrity of the EQC system, allow a transfer of some of the density from the EQC portion of developing sites to the less sensitive areas of these sites. The increase in effective density on the non-EQC portion of a site should be no more than an amount which is directly proportional to the percentage of the site that is preserved. Overall site yield will decrease as site constraints increase. Maximum density should be determined according to a simple mathematical expression based upon the ratio of EQC land to total land. This policy is in addition to other plan policies which impact density and does not supersede other land use compatibility policies.



PC Environment Committee Meeting

February 26, 2009



Agenda

- Clarification of issues raised by the Committee
 - Different requirements for different areas
 - Does the use have to encroach into the buffer area before reforestation requirements would apply?
 - Does the land disturbance have to be greater than 2500 square feet before the buffer requirements activate, if the requirements were incorporated into the performance criteria for RMAs?
- Revised numbers regarding miles of stream protected versus drainage areas
- Types of buildings in buffer area (single family residential, outbuildings, commercial)
- Estimation of increased level of effort for staff
- Workgroup consensus thus far
- Next steps

Miles of Stream Protected

Updated Estimates

Length of Stream (mi) per Drainage Area

Watershed (Pilot Area)	10 Acre		20 Acre		30 Acre		50 Acre		All Cleaned	
	mi	%	mi	%	mi	%	mi	%	mi	%
Difficult Run	23.49	56.3%	12.71	30.5%	6.27	15.0%	1.39	3.3%	41.70	100%
Dogue Creek	7.66	54.2%	5.63	39.9%	4.42	31.3%	1.70	12.1%	14.12	100%
Horsepen Creek	5.40	59.3%	3.79	41.6%	2.60	28.6%	0.79	8.7%	9.10	100%
Johnny Moore Creek	6.49	60.0%	4.02	37.1%	2.43	22.4%	0.93	8.5%	10.82	100%
Pimmit Run	5.72	52.0%	3.39	30.8%	1.72	15.7%	0.60	5.5%	11.00	100%
Wolf Run	7.87	58.4%	3.22	23.9%	1.40	10.4%	0.45	3.4%	13.46	100%
Total	56.62	56.5%	32.76	32.7%	18.84	18.8%	5.86	5.8%	100.20	
Countywide Projection	333.09		192.72		110.83		34.45		589.40	

Original Estimates

Length of Stream (mi) per Drainage Area

Watershed (Pilot Area)	10 Acre		30 Acre		50 Acre		All Cleaned	
	mi	%	mi	%	mi	%	mi	%
Difficult Run	17.82	43%	4.73	11.4%	0.92	2.2%	41.70	100%
Dogue Creek	7.55	53%	3.84	27.2%	1.27	9.0%	14.12	100%
Horsepen Creek	4.63	51%	1.64	18.0%	0.25	2.8%	9.10	100%
Johnny Moore Creek	5.45	50%	2.01	18.6%	0.61	5.7%	10.82	100%
Pimmit Run	3.45	31%	0.85	7.7%	0.32	2.9%	11.00	100%
Wolf Run	6.38	47%	1.24	9.2%	0.35	2.6%	13.46	100%
Total	45.28	45%	14.31	14.3%	3.73	3.7%	100.20	
Countywide Projection	266.38		84.15		21.95		589.40	

Types of Buildings in 35-foot Buffer Area

Buildings Intersecting 35ft Buffer by Drainage Area (acres)

Building Type		10	20	30	50
Pilot Study Area	Institutional	1			
	Multi Family Residential	6	1	1	
	Other/Outbuildings	7	3		
	Single Family Residential	235	150	96	39
Pilot Study Area Total		249	154	97	39
Countywide Projection		1465	906	571	229

Bldg Types:

SFR = Single Family Residential

MFR = Multi Family Residential

I = Institutional

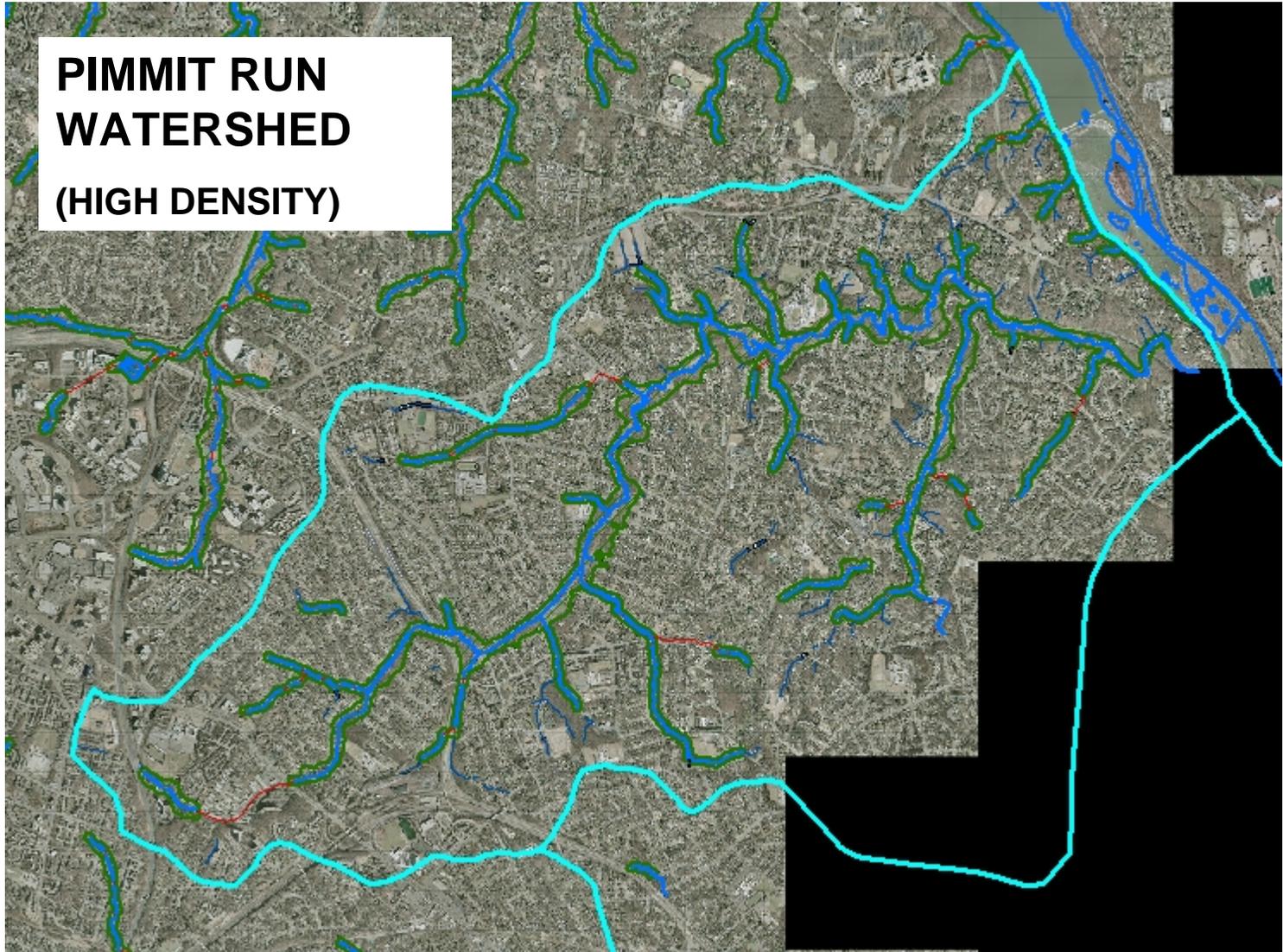
O = Other/Outbuildings

Types of Buildings in 35-foot Buffer Area (By Watershed)

Watershed	Bldg Type	10	20	30	50
Difficult Run	MFR	3			
	O	2	2		
	SFR	57	29	15	6
Difficult Run Total		62	31	15	6
Dogue Creek	MFR	3	1	1	
	O	5	1		
	SFR	84	55	35	14
Dogue Creek Total		92	57	36	14
Horsepen Creek	I	1			
	SFR	21	16	14	6
Horsepen Creek Total		22	16	14	6
Johnny Moore Creek	SFR	3	2	1	1
Pimmit Run	SFR	66	46	30	12
Wolf Run	SFR	4	2	1	
Grand Total		249	154	97	39

Bldg Types:
 SFR = Single Family Residential
 MFR = Multi Family Residential
 I = Institutional
 O = Other/Outbuildings

**PIMMIT RUN
WATERSHED
(HIGH DENSITY)**





Legend

Structures (red)

Contributing

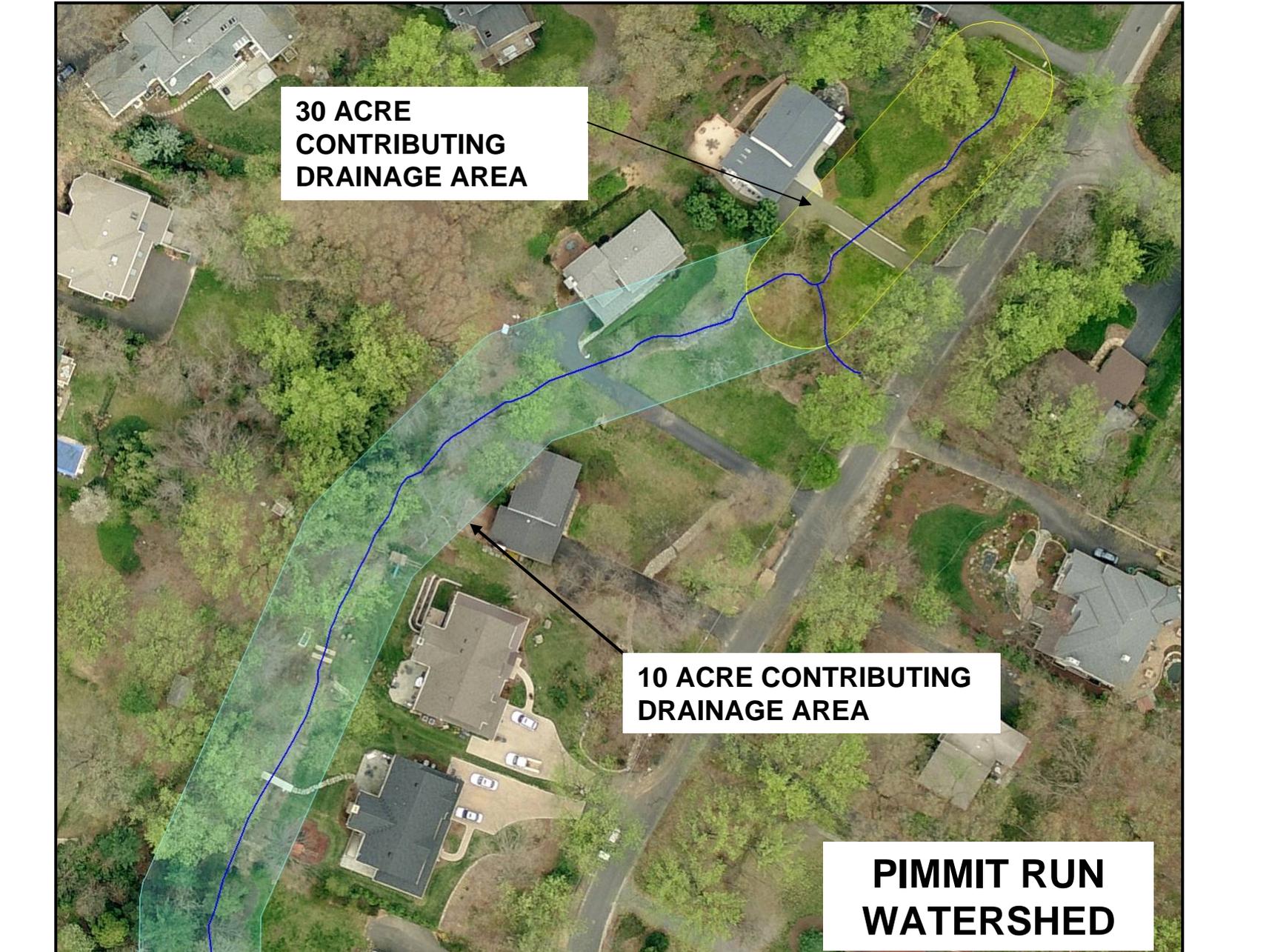
drainage area

10 acres (beige)

30 acres (purple)

50 acres (green)

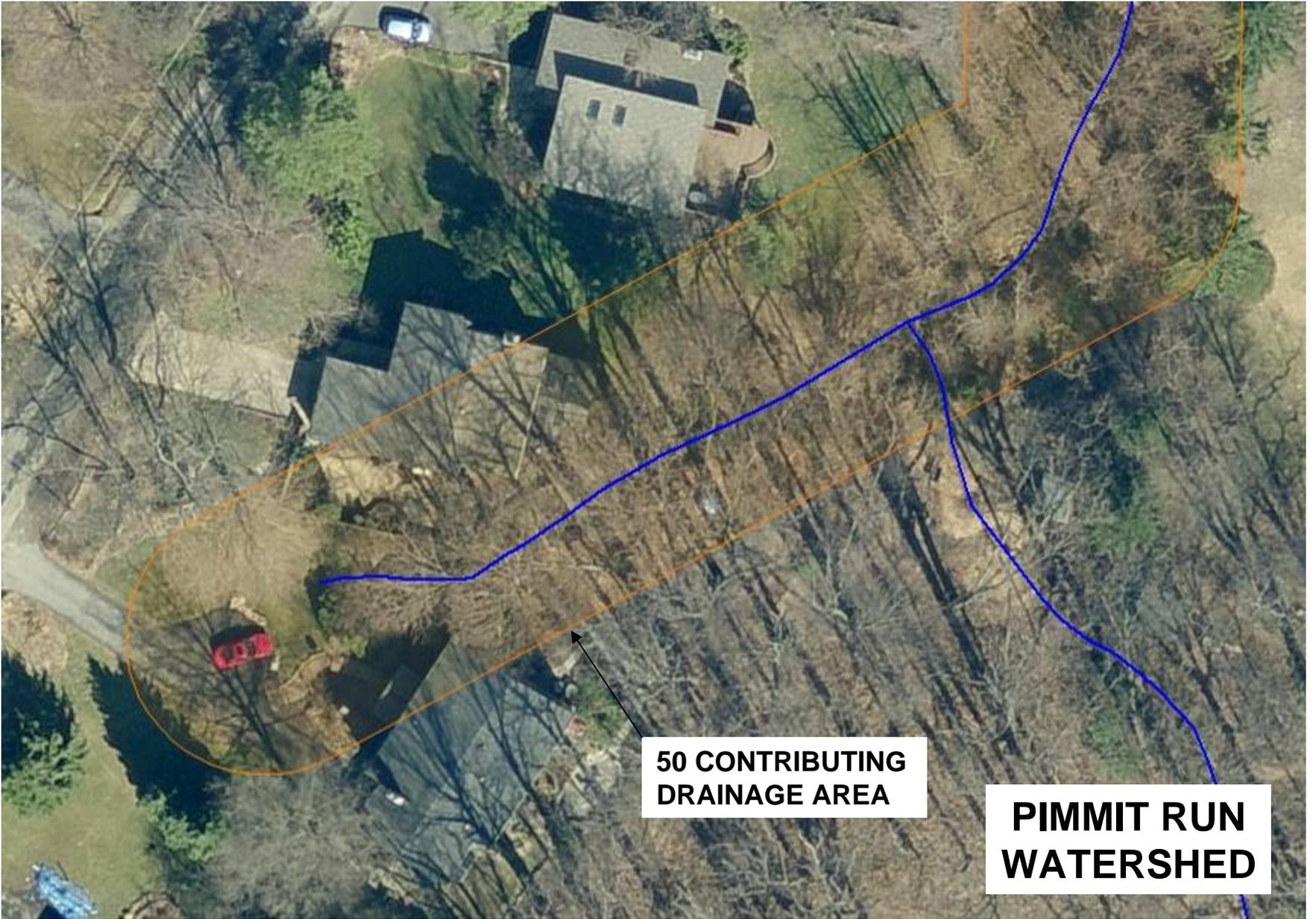
**PIMMIT RUN
WATERSHED**



**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

**10 ACRE CONTRIBUTING
DRAINAGE AREA**

**PIMMIT RUN
WATERSHED**



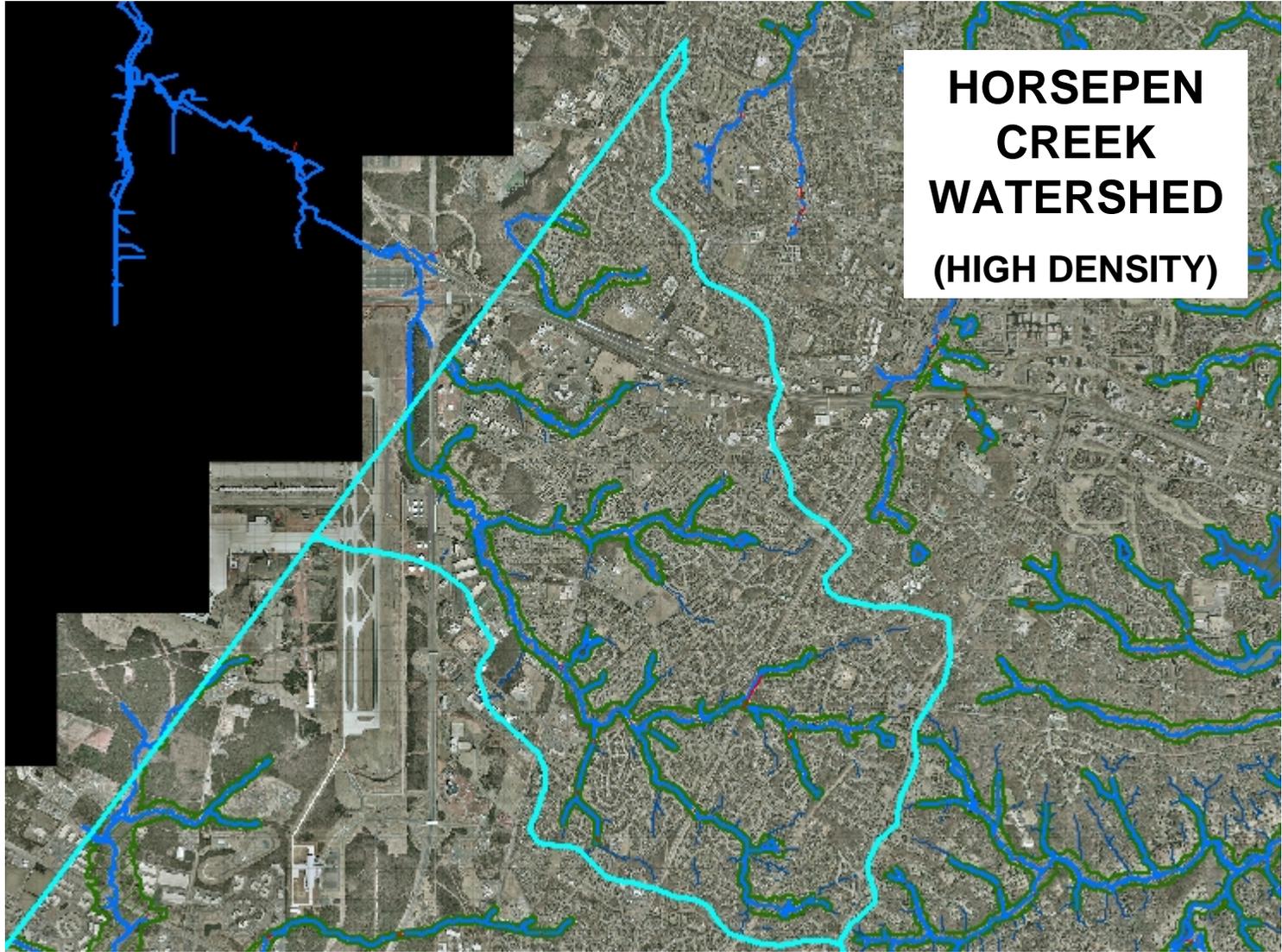
**50 CONTRIBUTING
DRAINAGE AREA**

**PIMMIT RUN
WATERSHED**

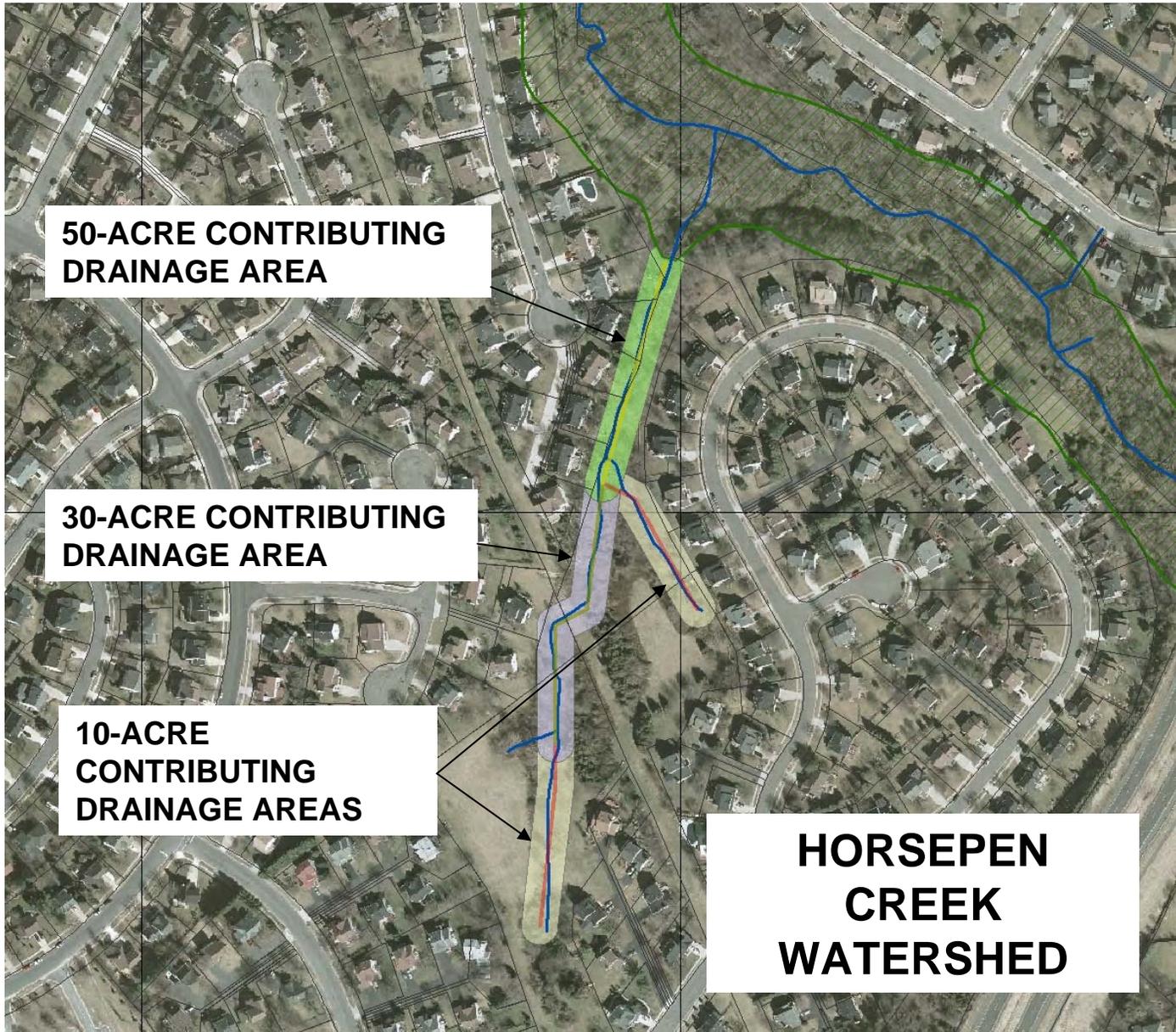


**10 ACRE
CONTRIBUTING
DRAINAGE AREA**

**PIMMIT RUN
WATERSHED**



**HORSEPEN
CREEK
WATERSHED
(HIGH DENSITY)**

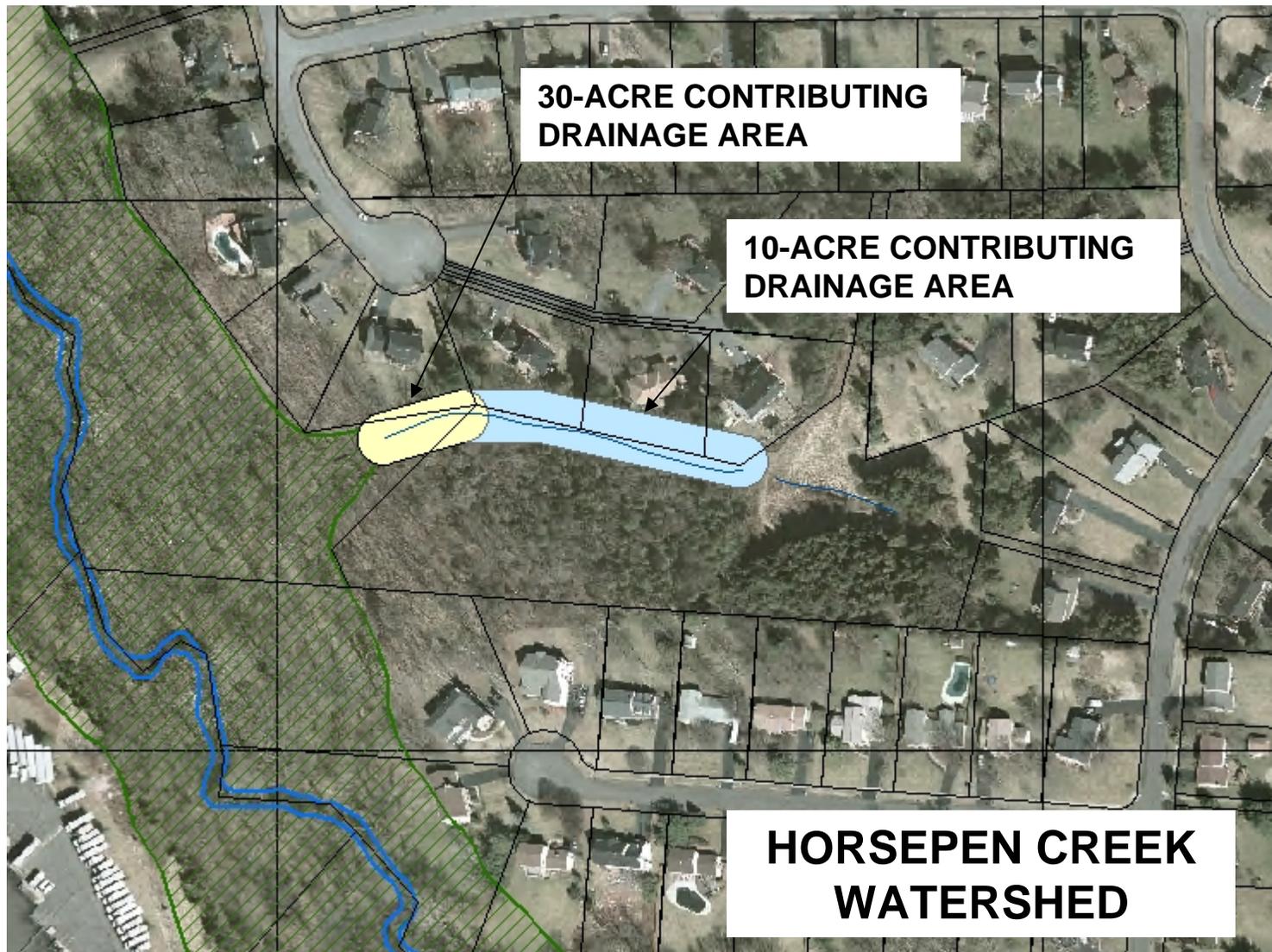


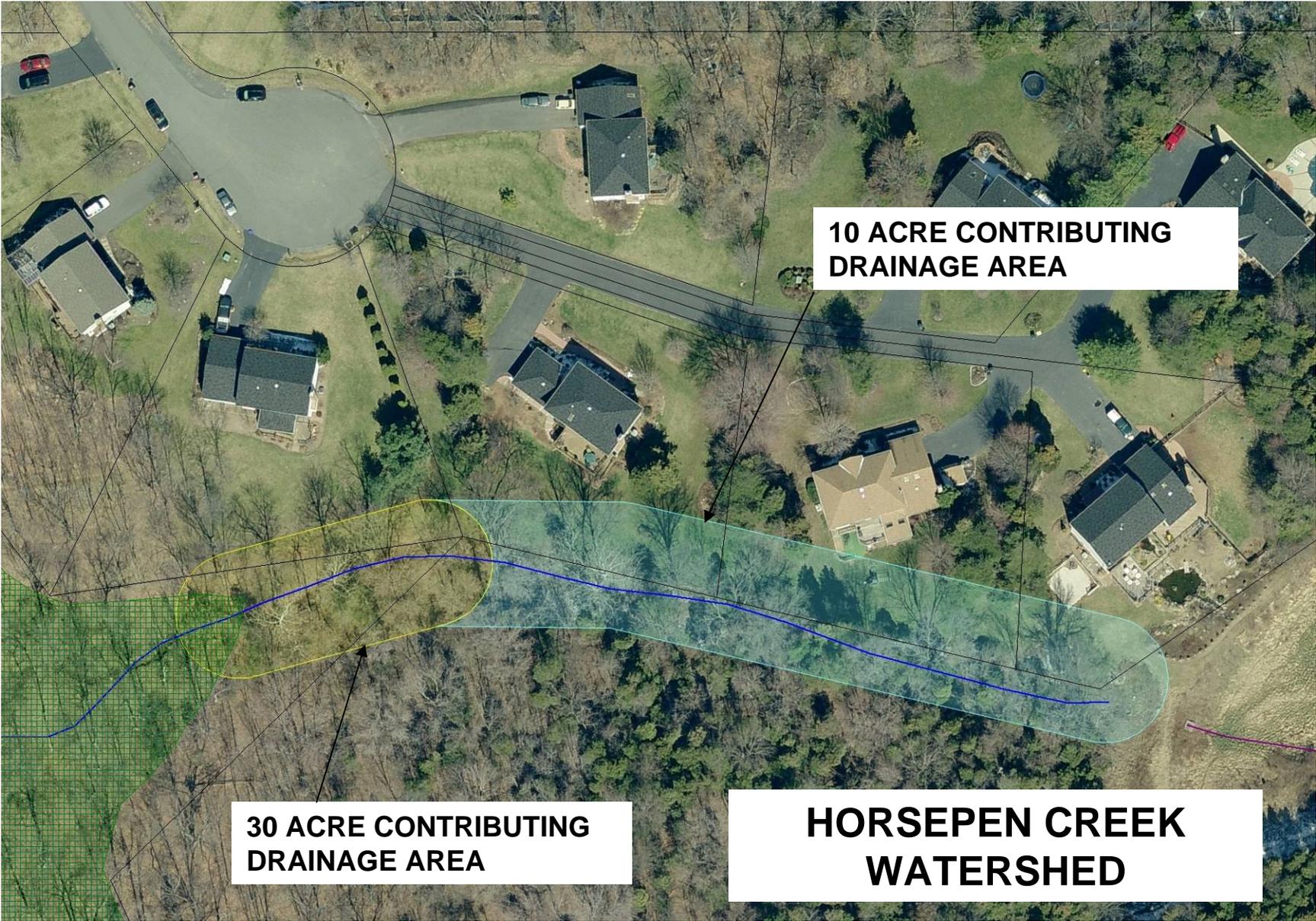
50-ACRE CONTRIBUTING DRAINAGE AREA

30-ACRE CONTRIBUTING DRAINAGE AREA

10-ACRE CONTRIBUTING DRAINAGE AREAS

HORSEPEN CREEK WATERSHED

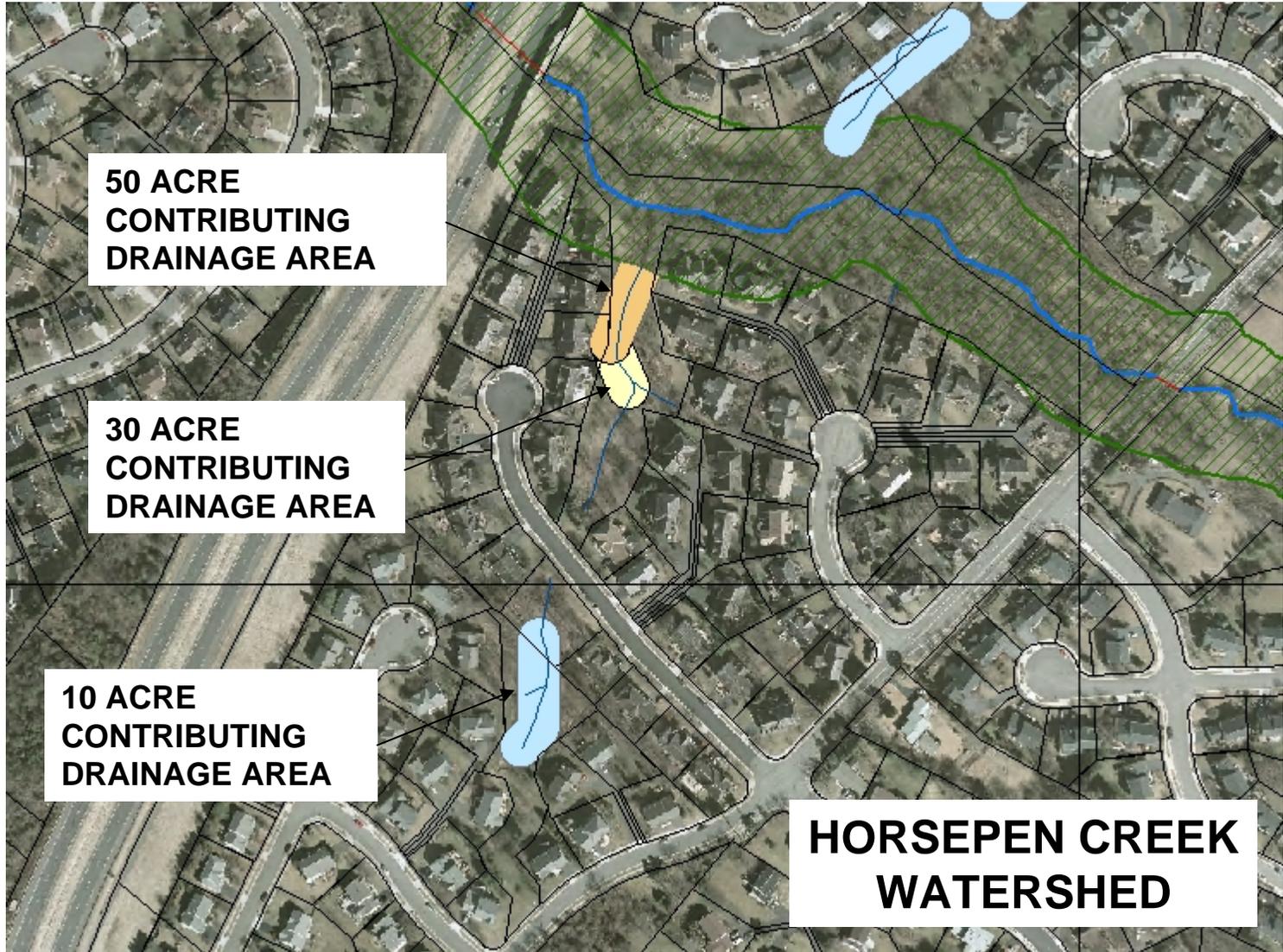




10 ACRE CONTRIBUTING DRAINAGE AREA

30 ACRE CONTRIBUTING DRAINAGE AREA

HORSEPEN CREEK WATERSHED

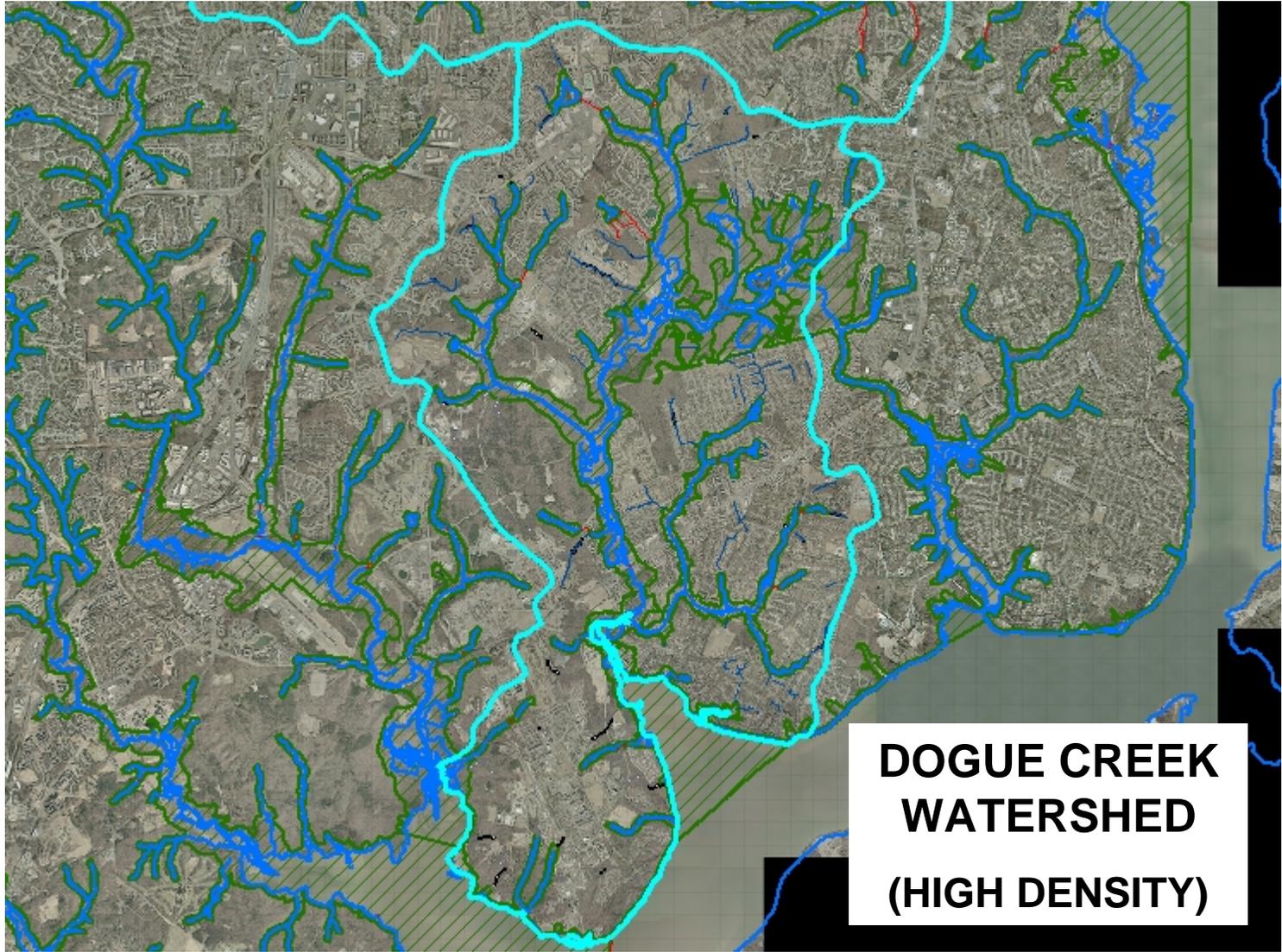


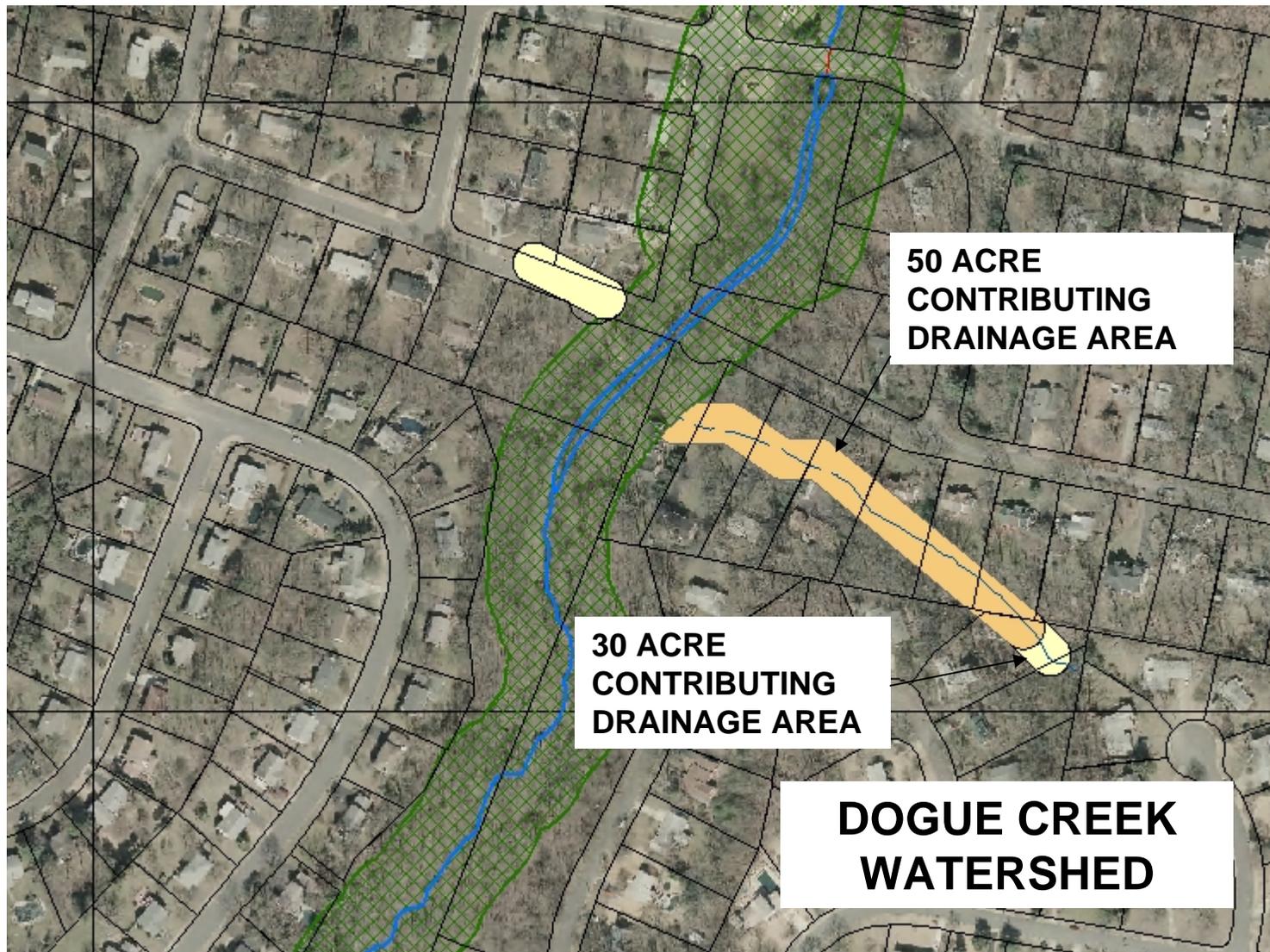
**50 ACRE
CONTRIBUTING
DRAINAGE AREA**

**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

**10 ACRE
CONTRIBUTING
DRAINAGE AREA**

**HORSEPEN CREEK
WATERSHED**





**50 ACRE
CONTRIBUTING
DRAINAGE AREA**

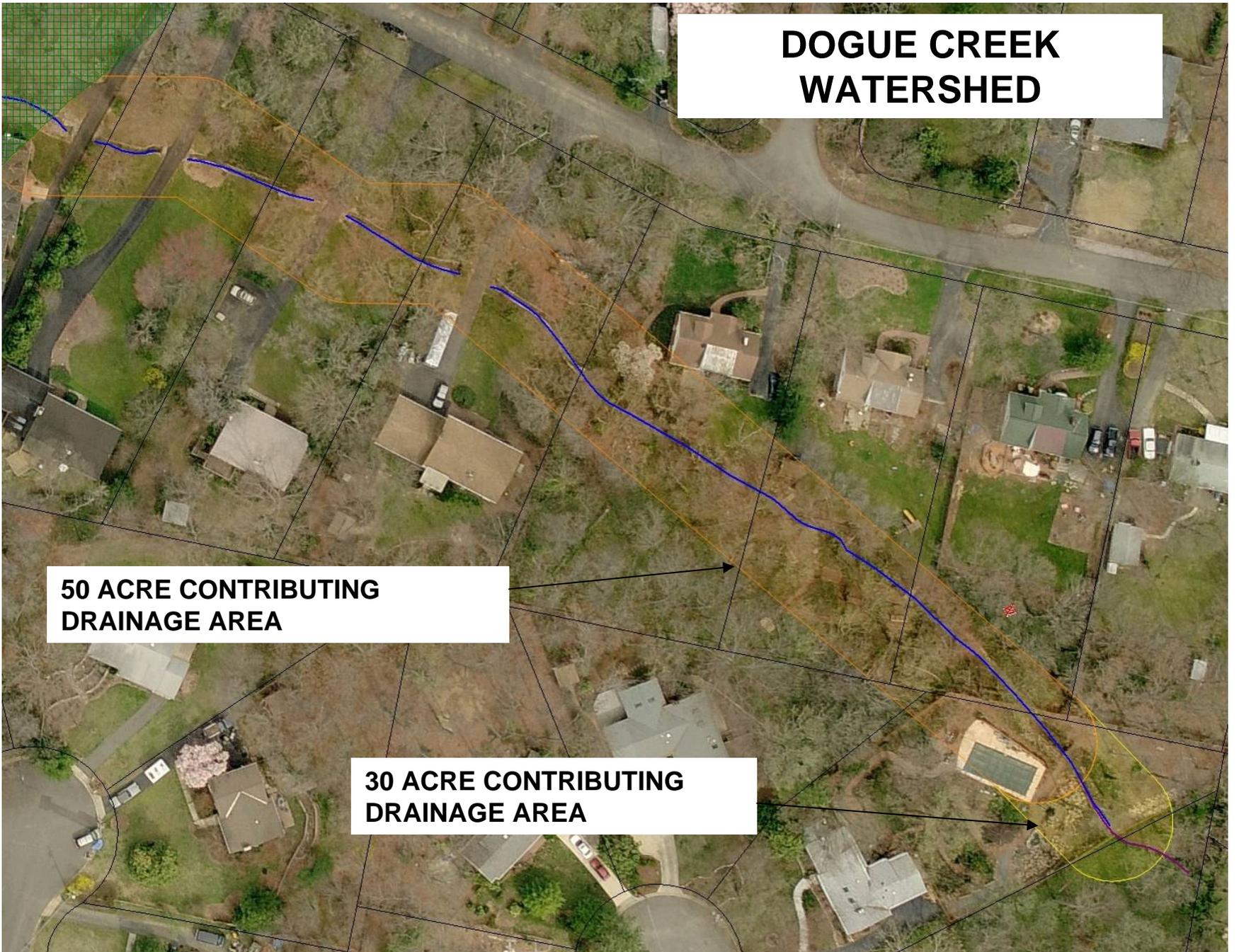
**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

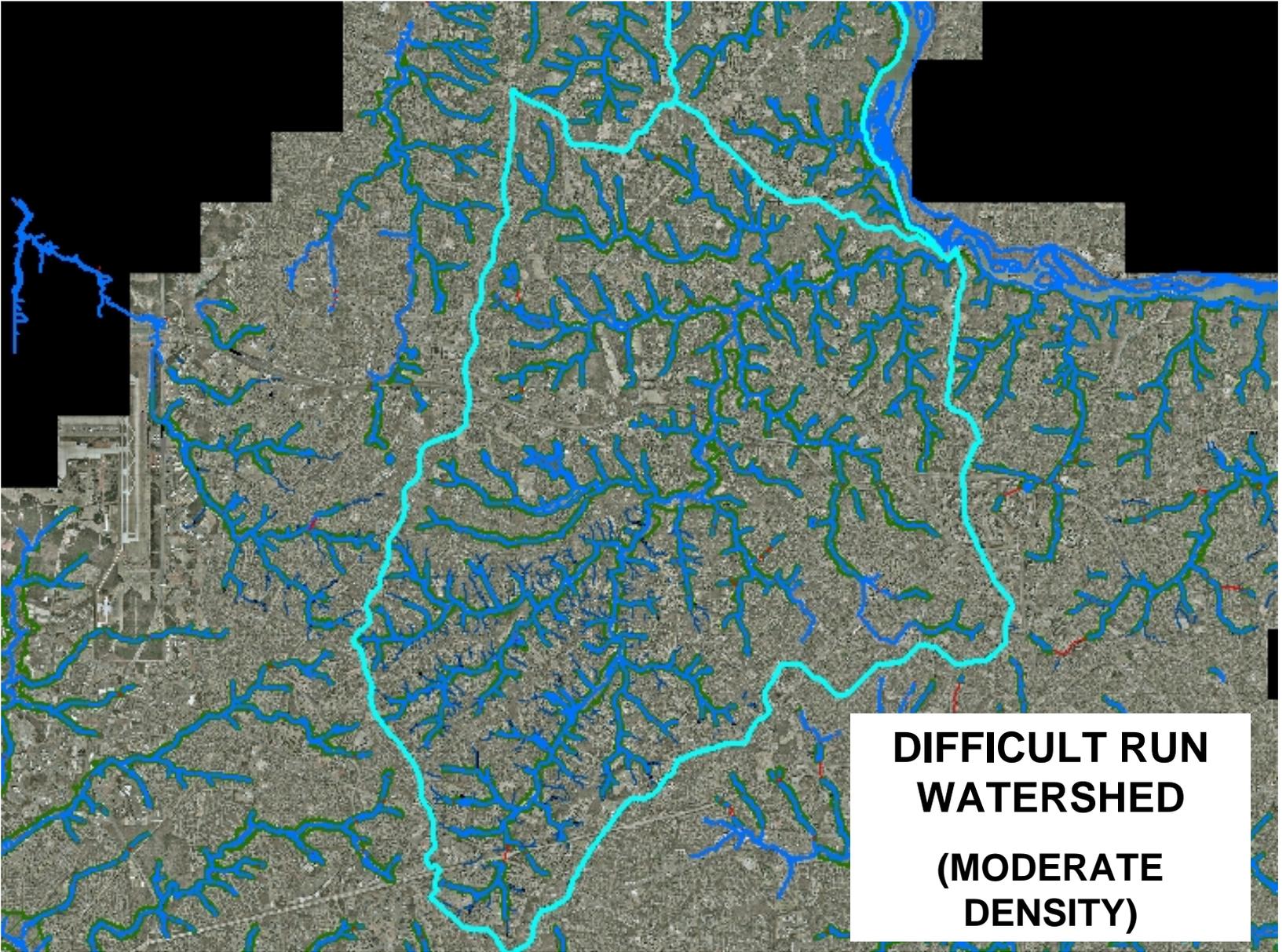
**DOGUE CREEK
WATERSHED**

DOGUE CREEK WATERSHED

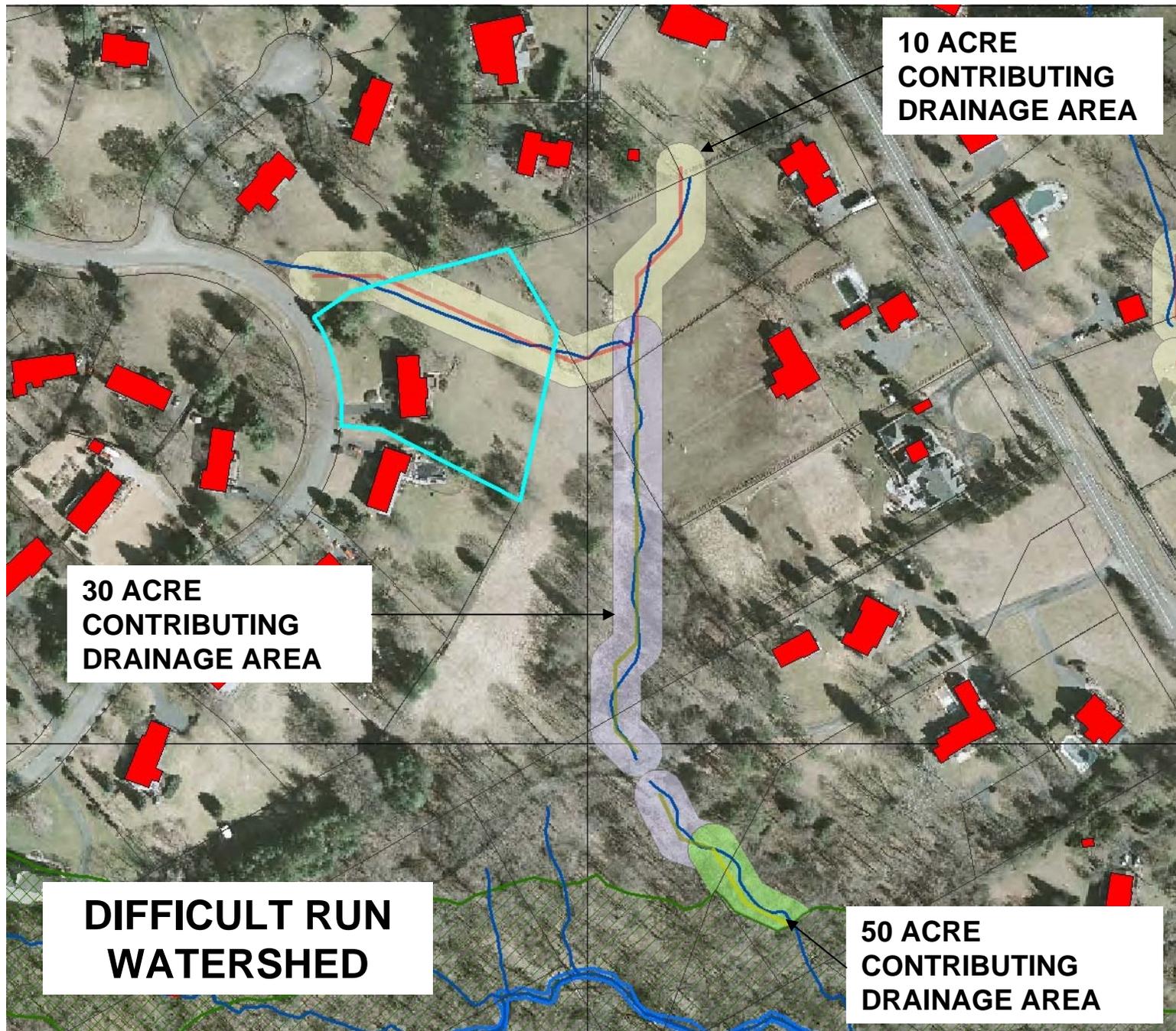
**50 ACRE CONTRIBUTING
DRAINAGE AREA**

**30 ACRE CONTRIBUTING
DRAINAGE AREA**





**DIFFICULT RUN
WATERSHED
(MODERATE
DENSITY)**

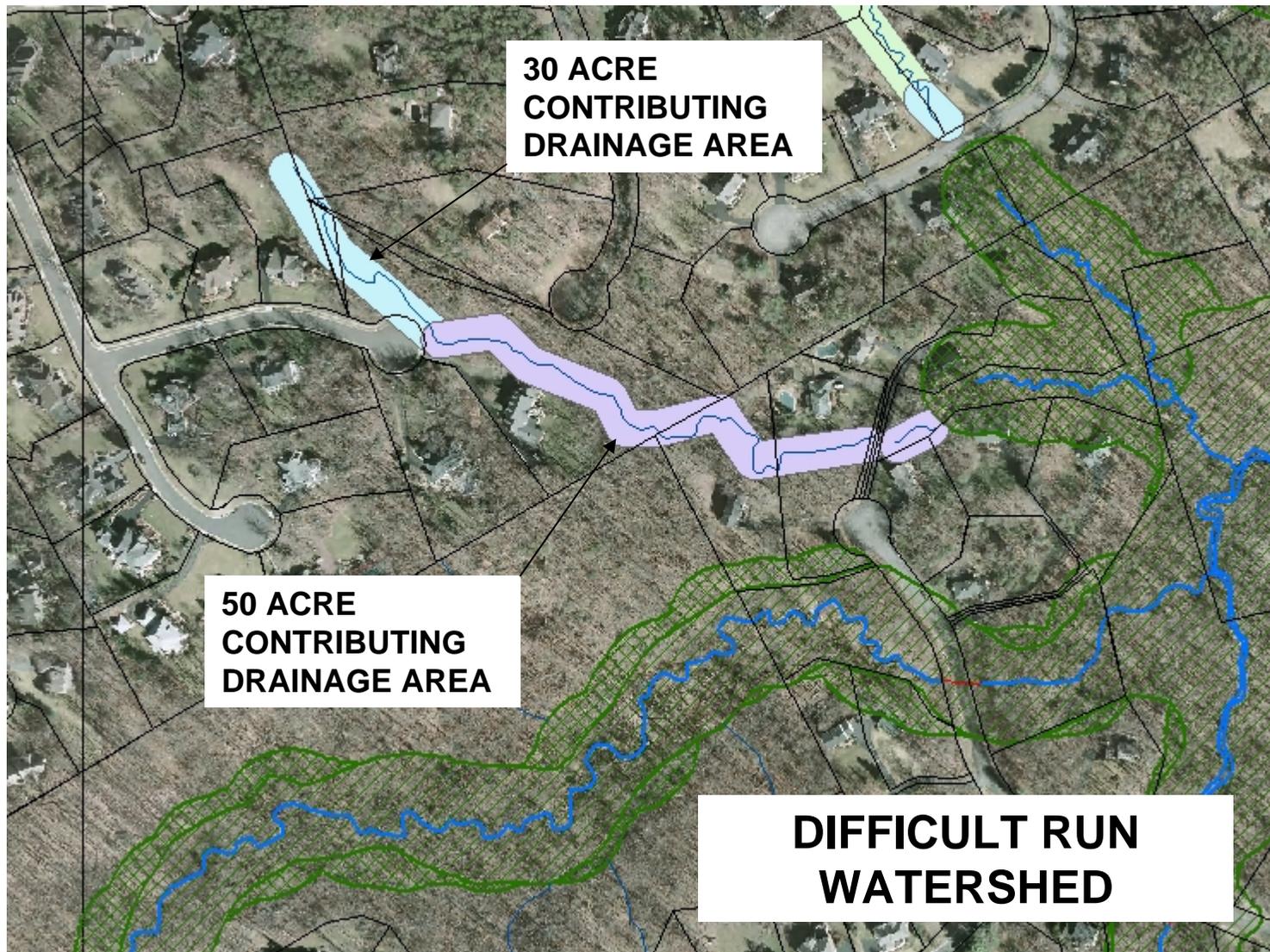


**10 ACRE
CONTRIBUTING
DRAINAGE AREA**

**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

**DIFFICULT RUN
WATERSHED**

**50 ACRE
CONTRIBUTING
DRAINAGE AREA**



**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

**50 ACRE
CONTRIBUTING
DRAINAGE AREA**

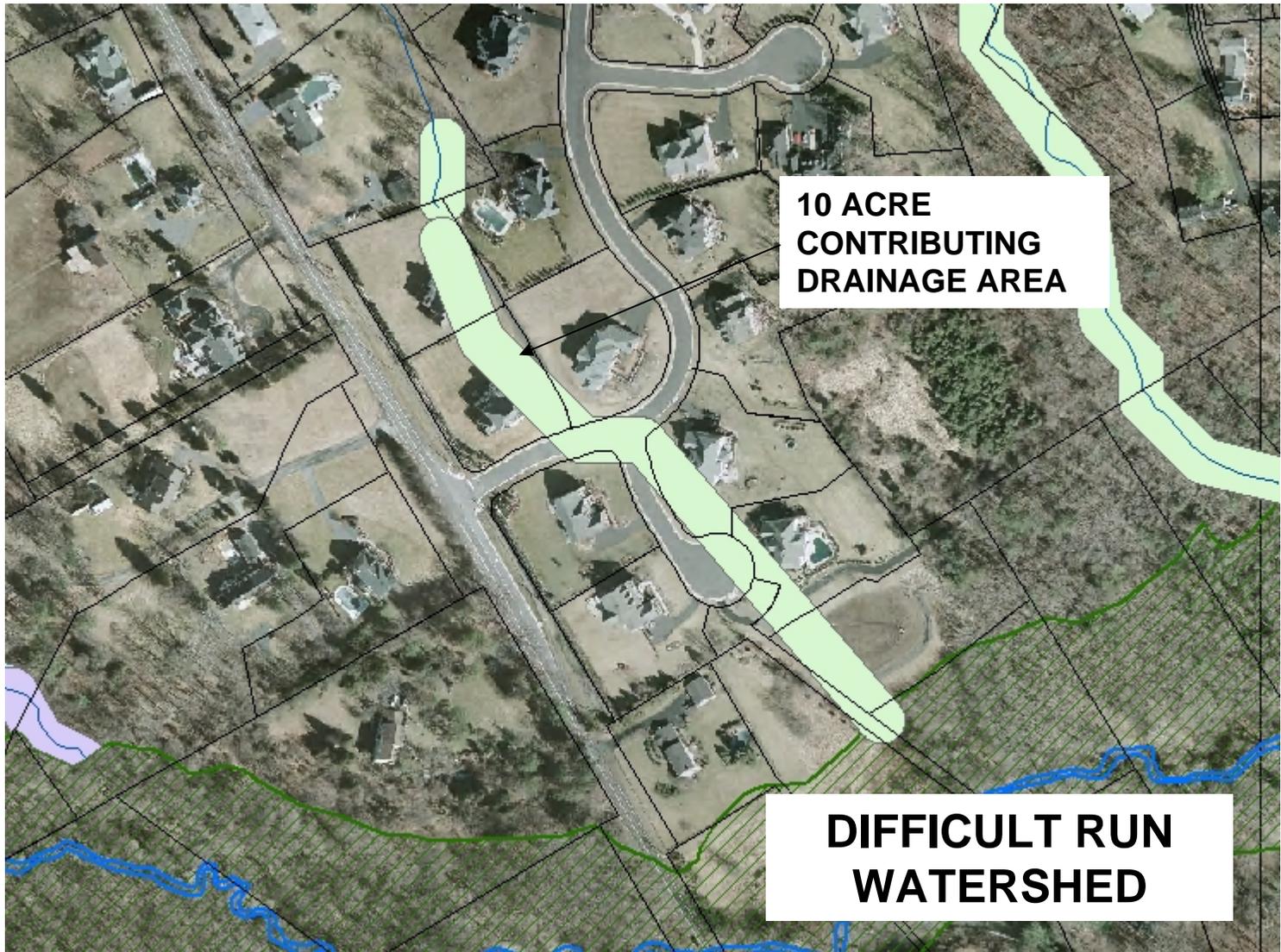
**DIFFICULT RUN
WATERSHED**



**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

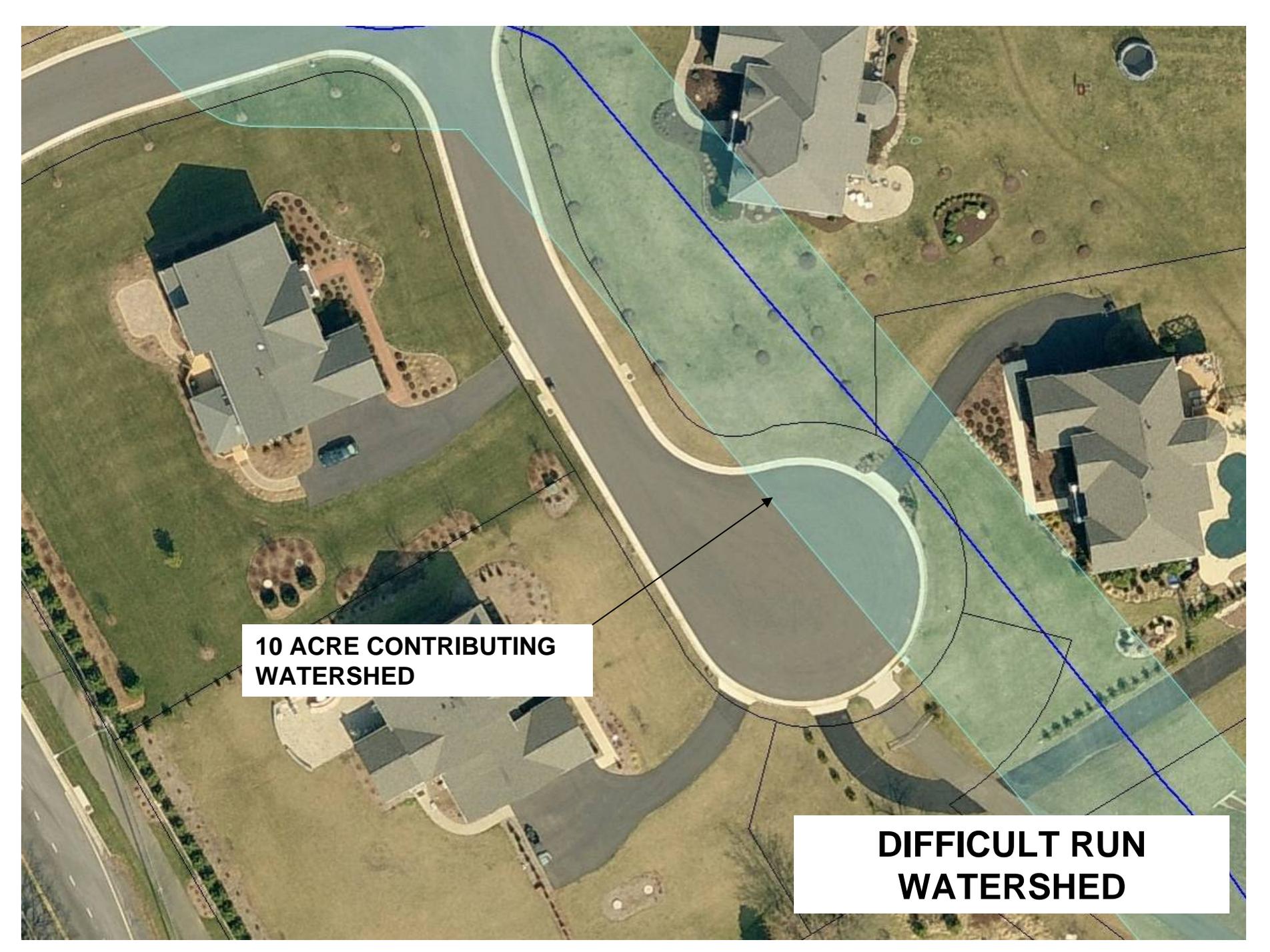
**50 ACRE
CONTRIBUTING
DRAINAGE AREA**

**DIFFICULT RUN
WATERSHED**



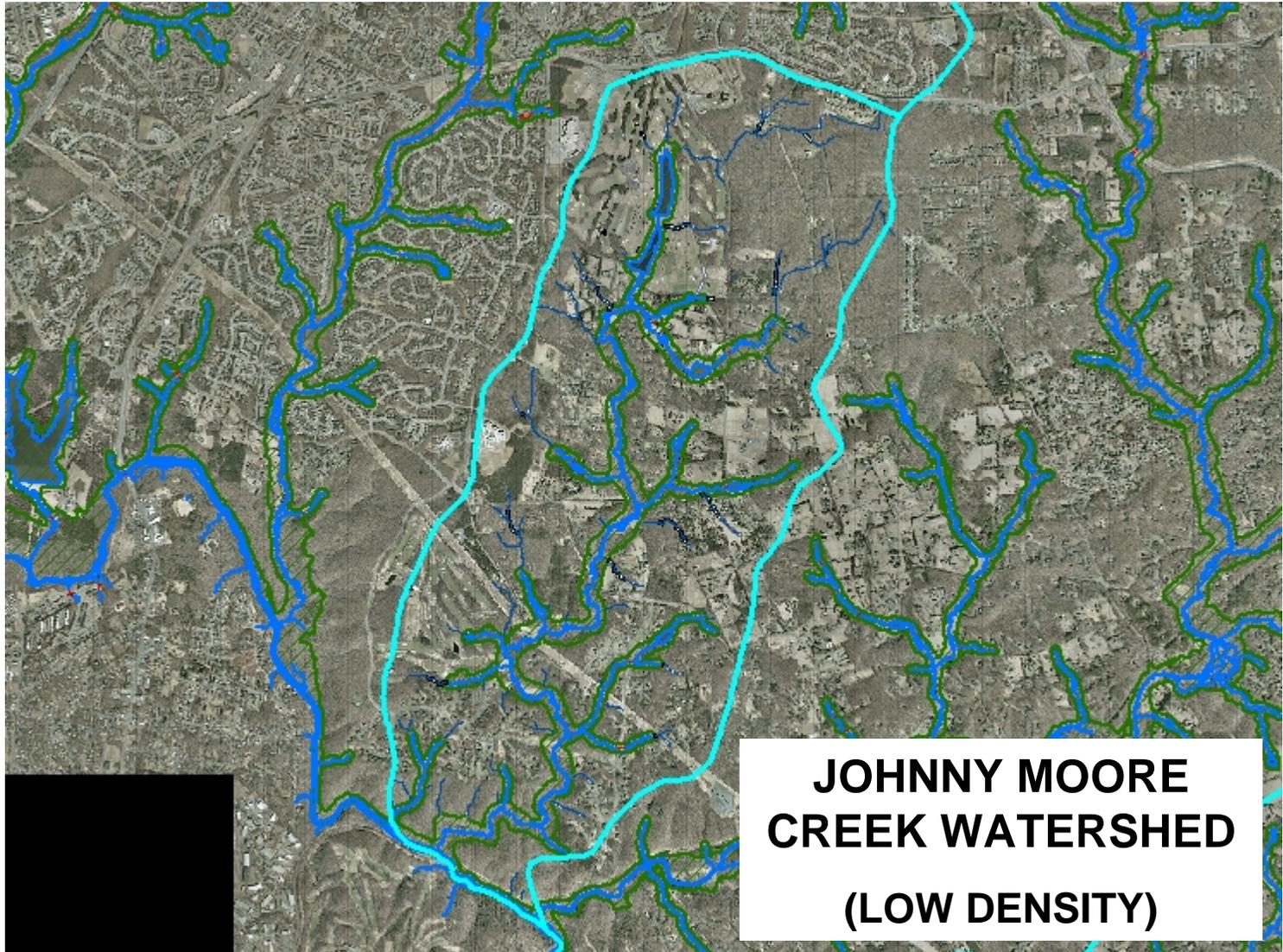
**10 ACRE
CONTRIBUTING
DRAINAGE AREA**

**DIFFICULT RUN
WATERSHED**



**10 ACRE CONTRIBUTING
WATERSHED**

**DIFFICULT RUN
WATERSHED**



**JOHNNY MOORE
CREEK WATERSHED
(LOW DENSITY)**

**10 ACRE
CONTRIBUTING
DRAINAGE AREA**

**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

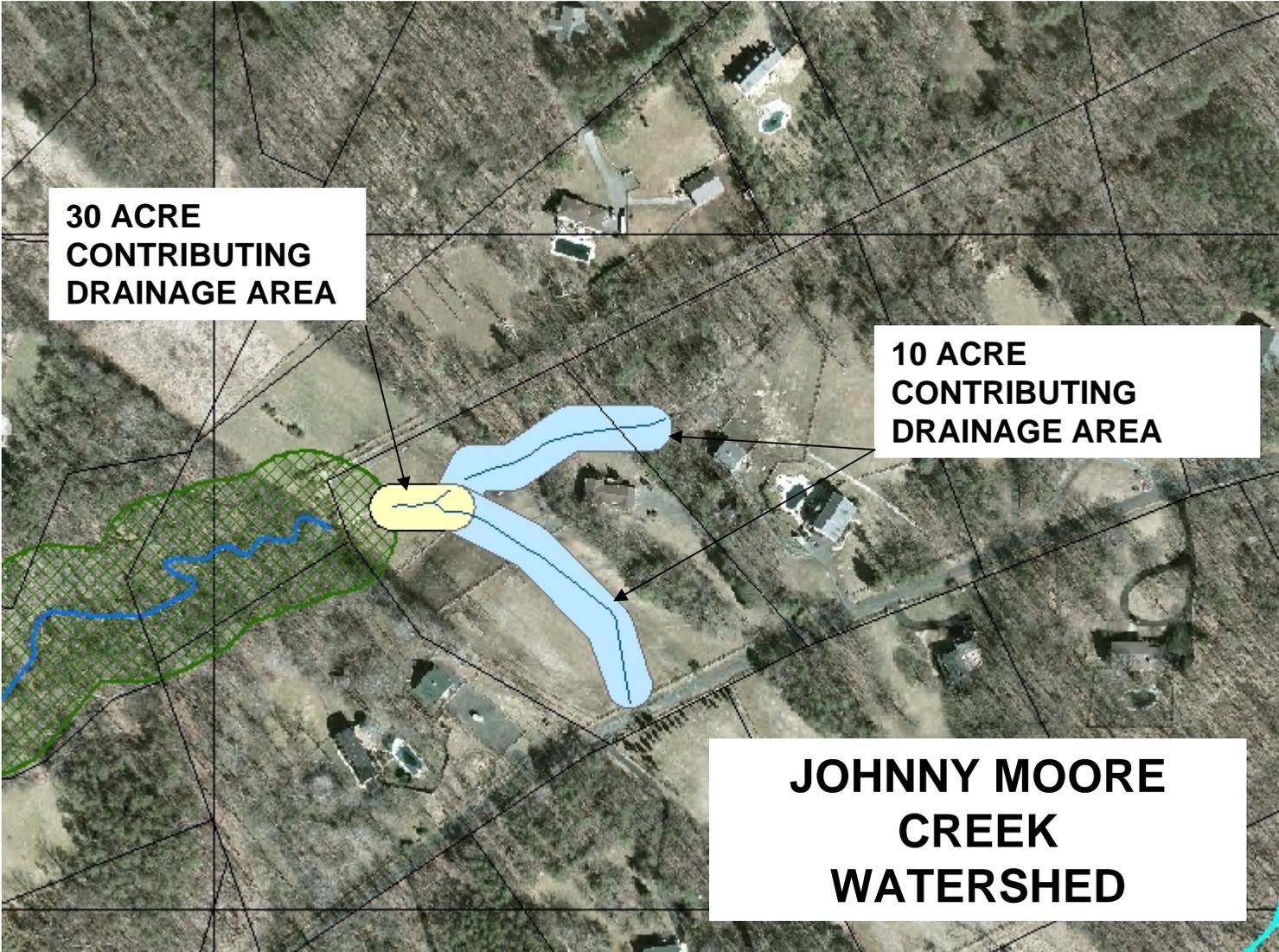
**50 ACRE
CONTRIBUTING
DRAINAGE AREA**

**JOHNNY MOORE
CREEK
WATERSHED**



**30 ACRE CONTRIBUTING
DRAINAGE AREA**

**JOHNNY MOORE CREEK
WATERSHED**

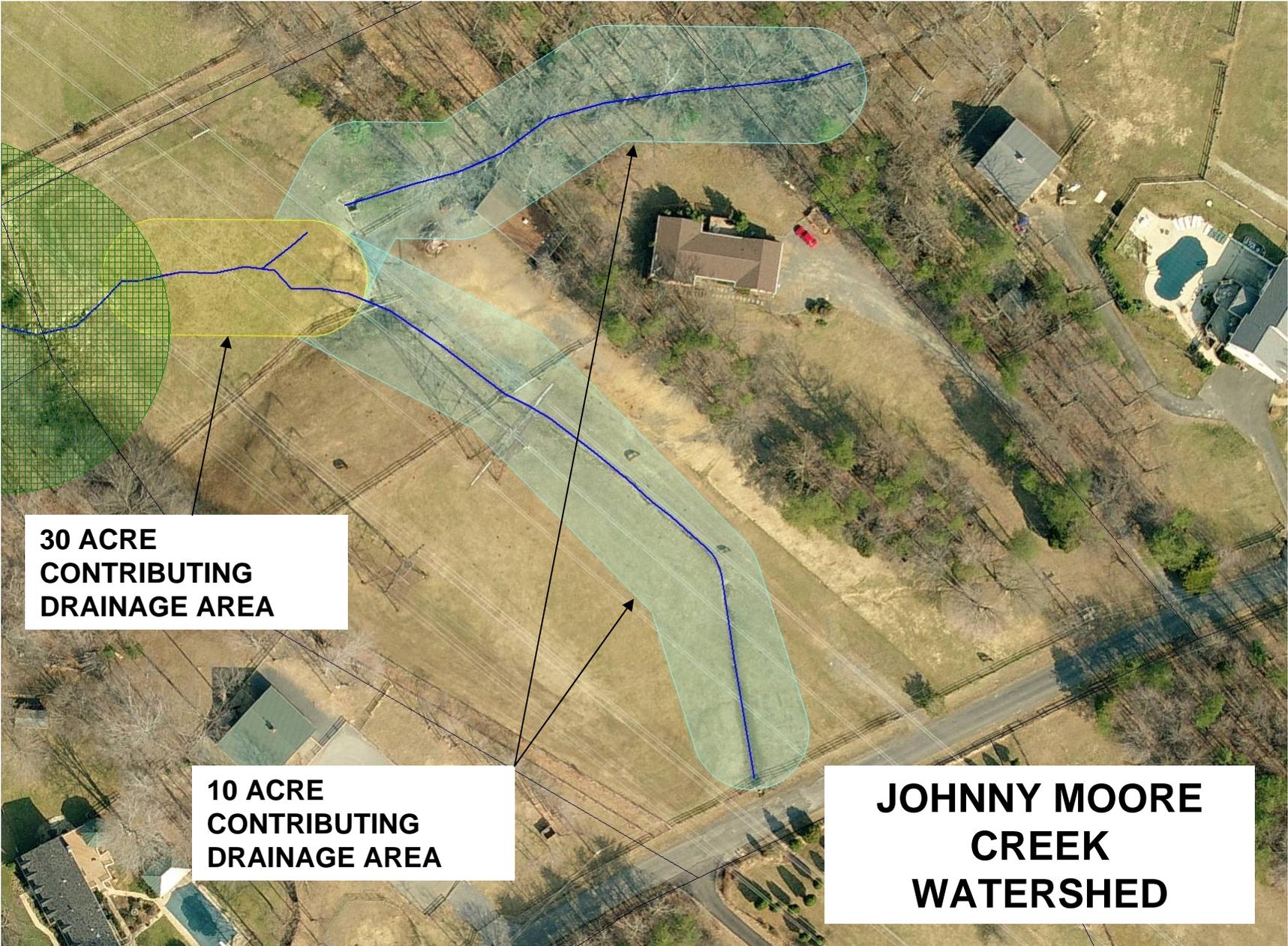


**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

The image is an aerial photograph of a rural area with a grid of property lines. A central creek is highlighted in light blue. To the left of the creek, a green cross-hatched area represents a 30-acre contributing drainage area. To the right of the creek, a yellow oval highlights a 10-acre contributing drainage area. A yellow oval also highlights a section of the creek itself. Arrows point from the text boxes to these specific areas. The overall area is labeled as the Johnny Moore Creek Watershed.

**10 ACRE
CONTRIBUTING
DRAINAGE AREA**

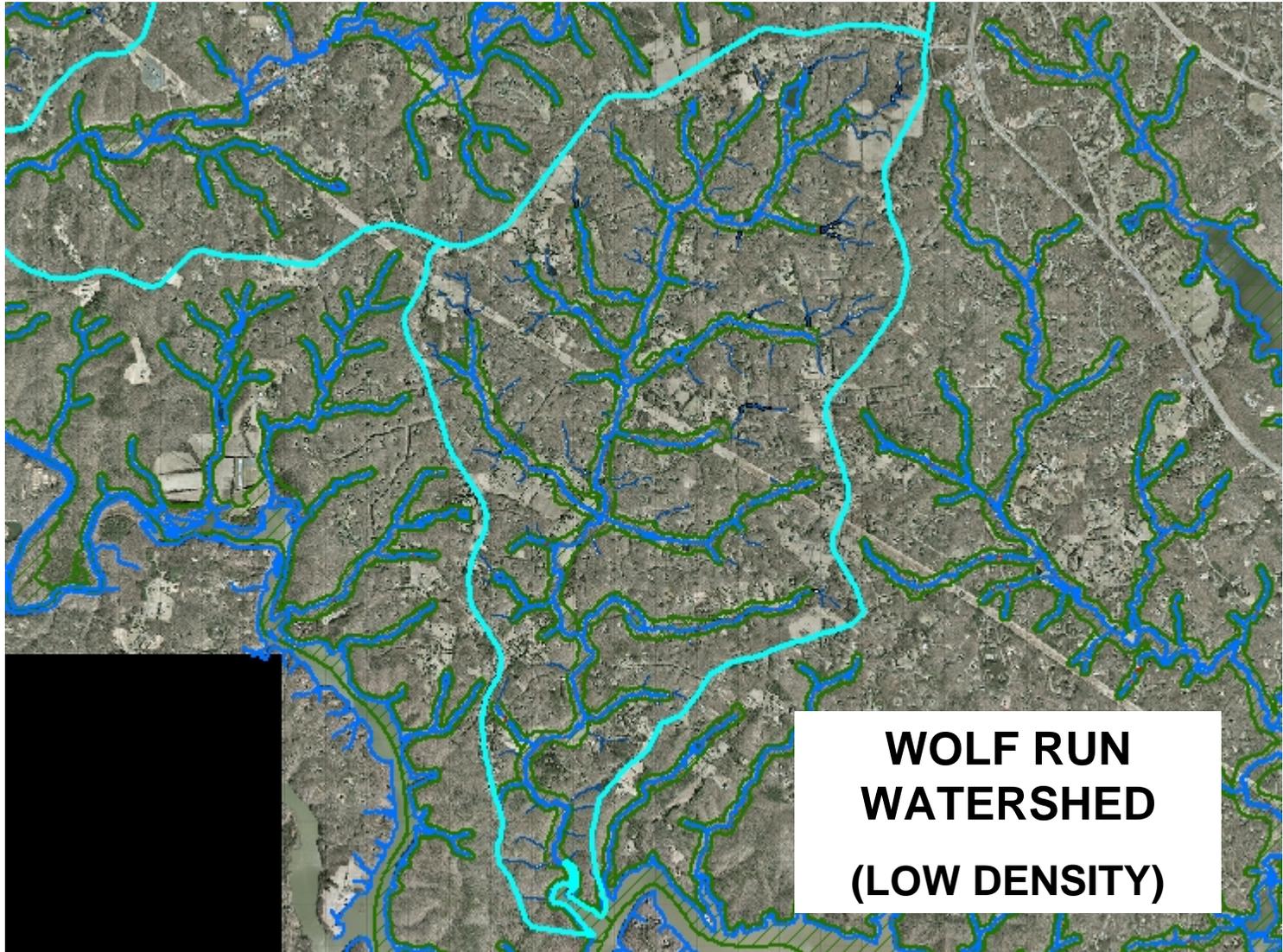
**JOHNNY MOORE
CREEK
WATERSHED**



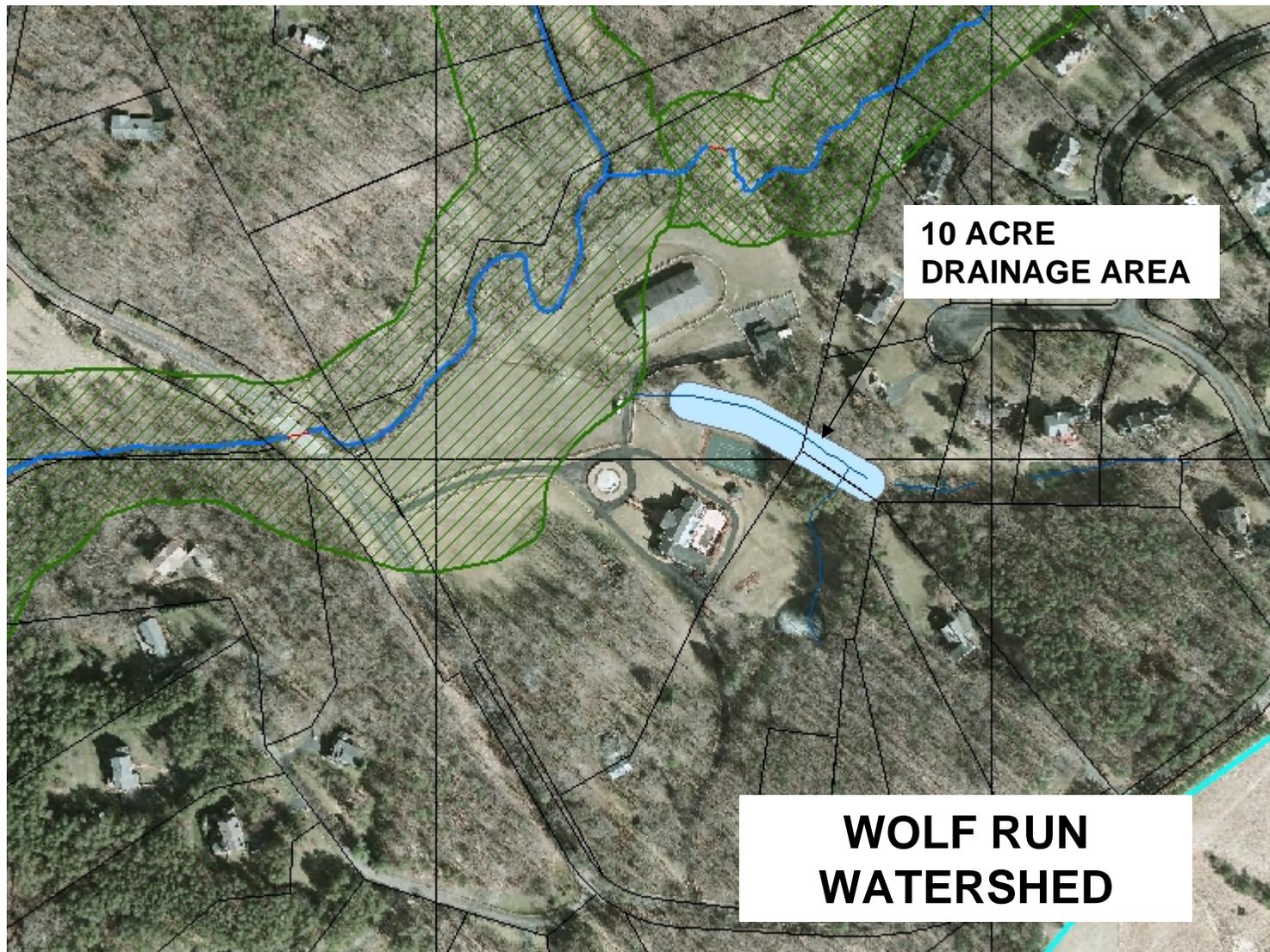
**30 ACRE
CONTRIBUTING
DRAINAGE AREA**

**10 ACRE
CONTRIBUTING
DRAINAGE AREA**

**JOHNNY MOORE
CREEK
WATERSHED**

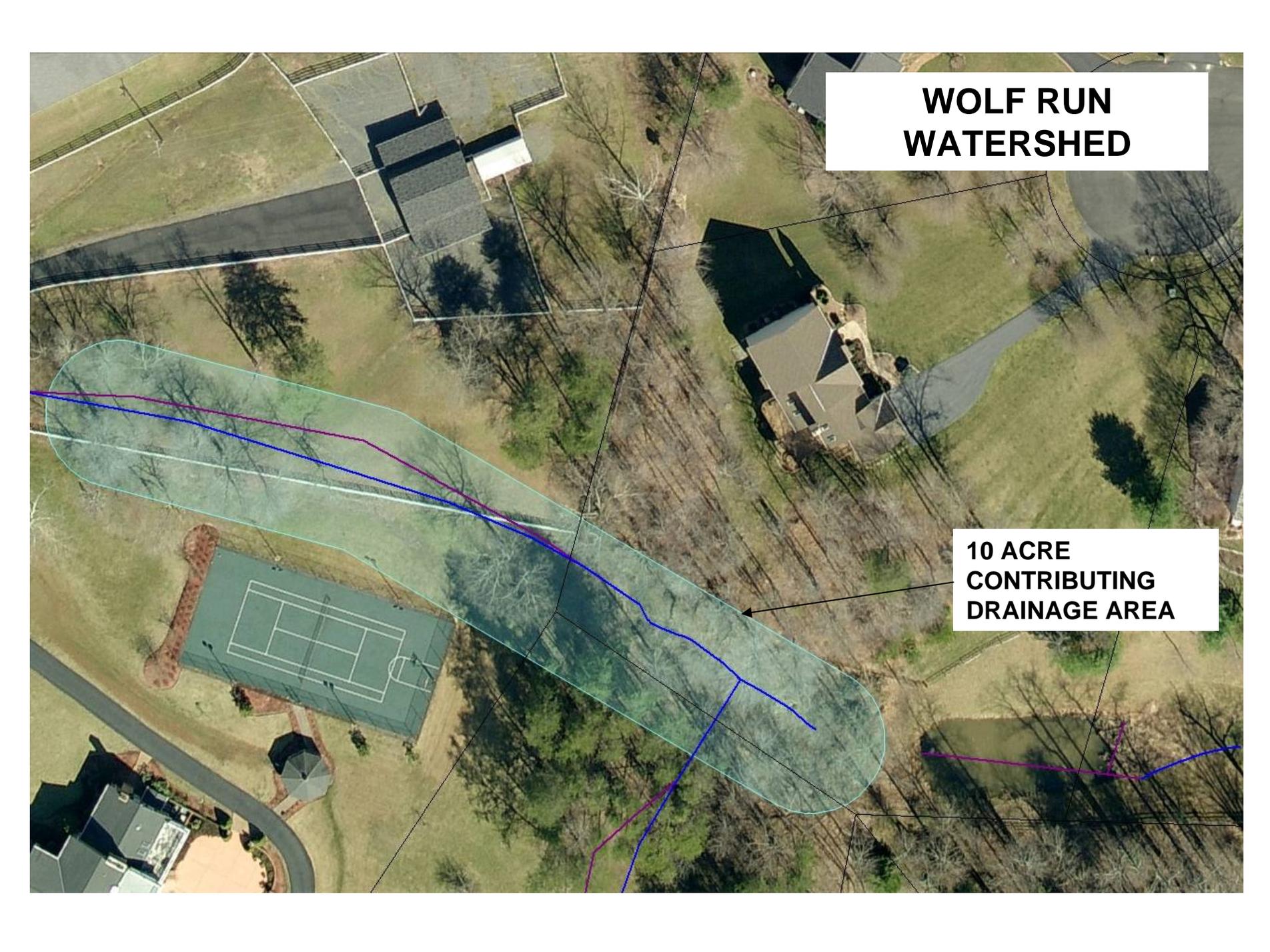


**WOLF RUN
WATERSHED
(LOW DENSITY)**



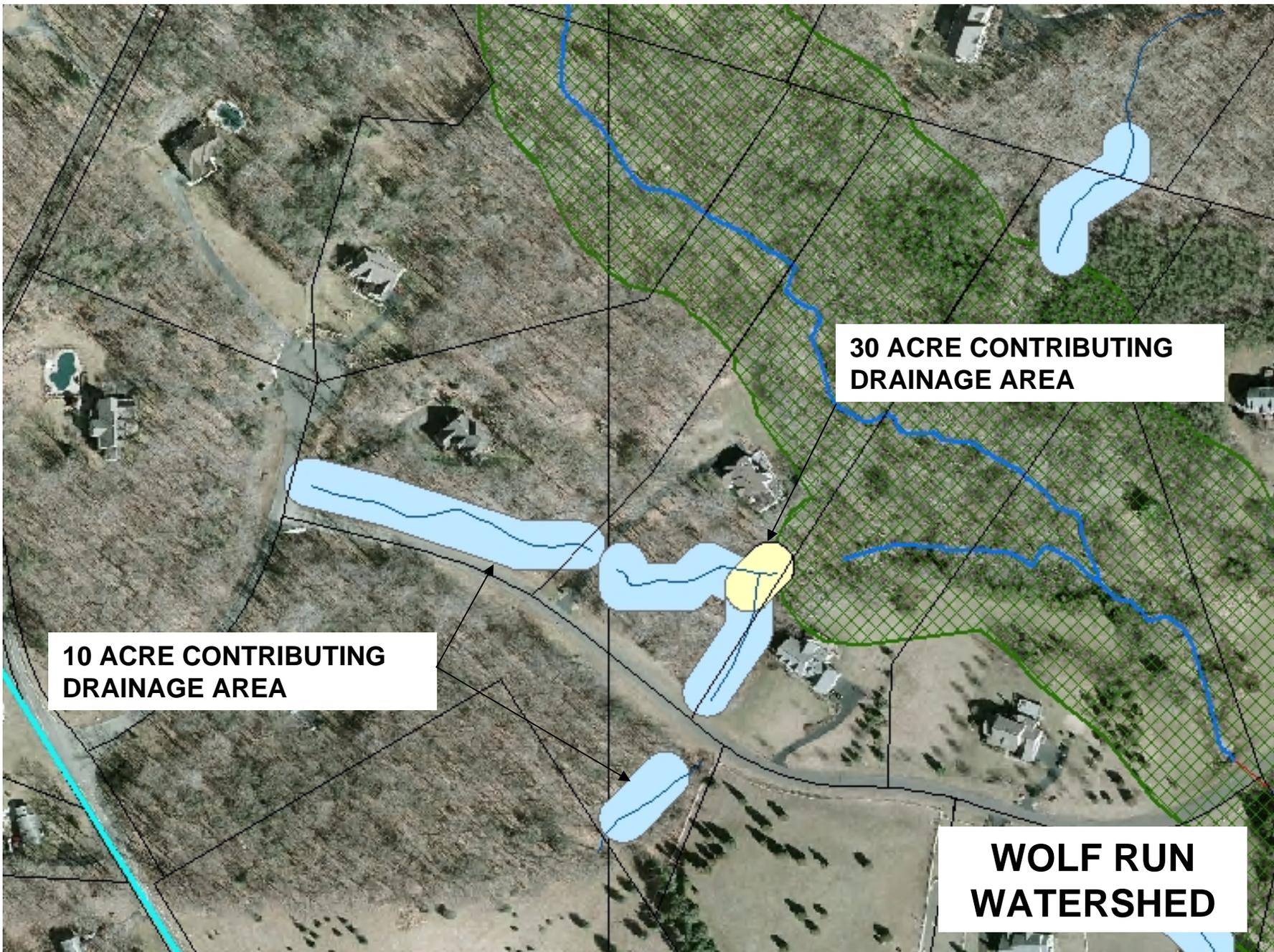
**10 ACRE
DRAINAGE AREA**

**WOLF RUN
WATERSHED**

An aerial photograph of a residential area with a green semi-transparent overlay indicating a 10-acre contributing drainage area. The area is bounded by a blue line and contains a purple line representing a stream or drainage path. The surrounding landscape includes houses, a tennis court, and various trees.

WOLF RUN WATERSHED

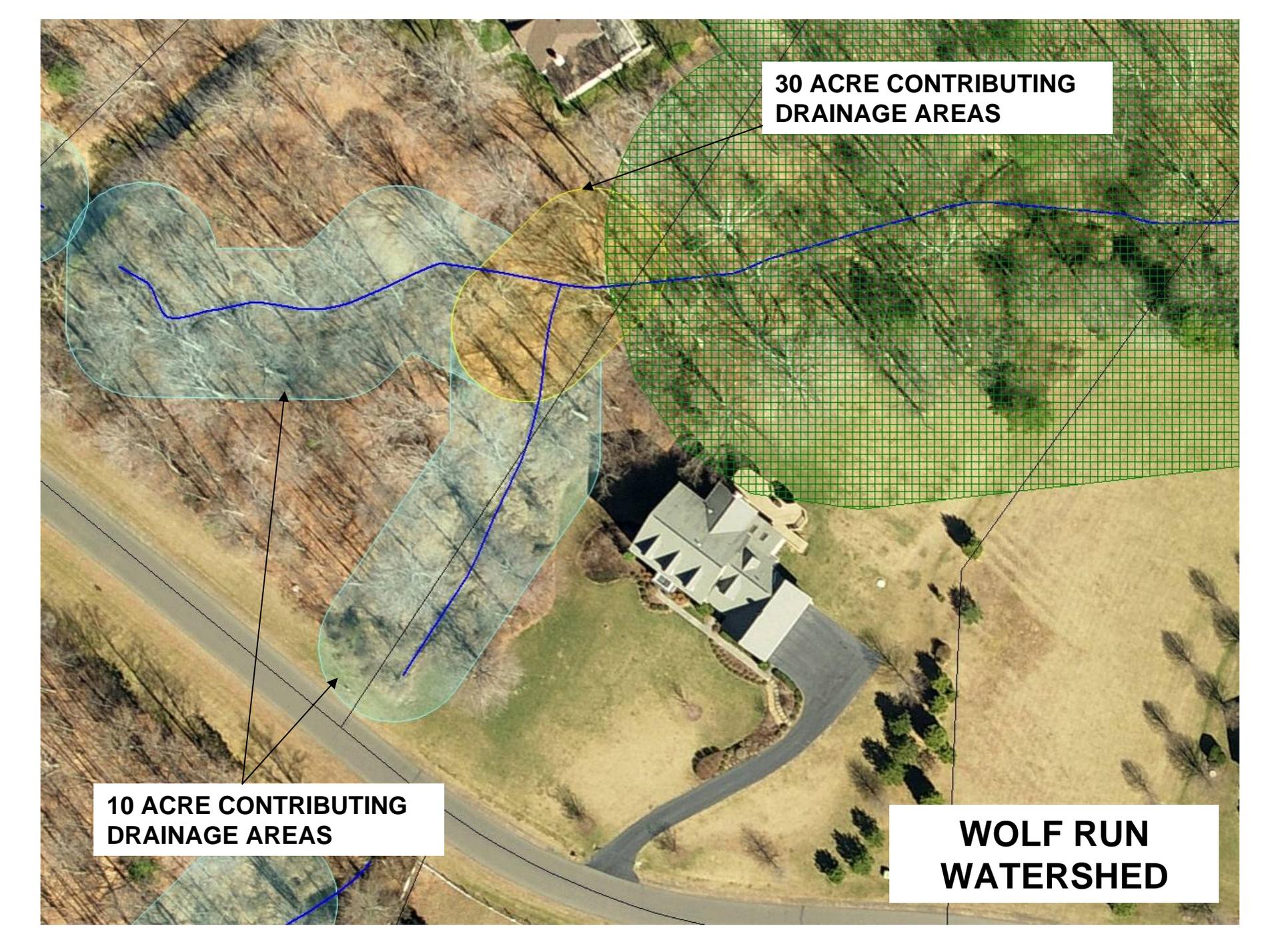
**10 ACRE
CONTRIBUTING
DRAINAGE AREA**



**10 ACRE CONTRIBUTING
DRAINAGE AREA**

**30 ACRE CONTRIBUTING
DRAINAGE AREA**

**WOLF RUN
WATERSHED**

An aerial photograph of a residential area with a large house and a winding road. A blue line representing a stream flows through the property. Three drainage areas are highlighted: a large green grid area in the upper right, a yellow area in the center, and a light blue area on the left. Arrows point from text boxes to these areas.

**30 ACRE CONTRIBUTING
DRAINAGE AREAS**

**10 ACRE CONTRIBUTING
DRAINAGE AREAS**

**WOLF RUN
WATERSHED**

Estimated Level of Effort (hours)

DRAINAGE AREA IN ACRES	NOTIFICATION (\$)	MAPPING (one time effort in hrs)	Review (annual effort in hrs)	Inspection (annual effort in hrs)	Enforcement (annual effort in hrs)	TOTAL ANNUAL EFFORT (hrs)
10	\$3,900	8,400	1,332	1,599	2,534	5,465
30	\$1,400	3,200	474	570	917	1,961
50	\$450	1,300	153	183	285	621

- Assume 5% of all effected properties would propose development.
- Assume 1% of effected properties are involved in an alleged violation.
- Assume 35-foot buffer width throughout the county.
- Does not account for updates to maps.

Workgroup Consensus to-date

- Use drainage area to establish how far upstream (XX acres)
- Permit the following uses in buffer area
 - Minor additions (similar to RPA requirements).
 - Loss of buildable area (similar to RPA requirements)
 - Other exceptions, exemptions and allowed uses provided in the RPA requirements.
 - Better water quality benefits (with reservations, accommodate other functions of riparian buffer as well).
 - Tree preservation (mature stand of trees can be saved in lieu of buffer).
 - Trails and paths.
 - Accessory uses to residential structures that do not require a building permit (small sheds, fences).
- Buffer width should be a minimum of 35 feet, but consider wider width in certain areas such as the WSPOD (how wide?)
- Reforestation (not possible as an RMA requirement)

Next Steps

- Any reservations about establishing riparian buffers upstream of RPA's as a regulatory requirement?
- Process by which the Board will receive this information
- Board's Environmental Committee Meeting (June timeframe?)
- Additional PC Environment/EQAC meetings
- Staff to present process by which PC Environmental Committee and EQAC developed recommendation and the final recommendation.