

Buffer cheat sheet: How are buffers protected? How do buffers get planted?

In order to better understand the buffer issue and to help the Committee to formulate recommendations, it is useful to think about buffers in three contexts:

1. Regulatory buffer protection. This includes local regulations like setbacks in critical areas ordinances or limits on clearing in critical areas. These tell you what you can and cannot do in buffer areas, and the width of those areas. Widths tend to depend on the type of waterway or class of wetland. Buffer regulations differ significantly between jurisdictions and often between land use categories.
2. Required buffer creation or enhancement as mitigation. Some regulations provide for flexibility in certain rules (such as clearing of vegetated buffers), but require mitigation, often in the form of buffer planting. The basic premise of mitigation is that the permittee is causing harm to a resource and that harm must be mitigated. Mitigation requirements can be triggered by local, state or federal permits. Mitigation requirements vary significantly between jurisdictions and permitting agencies. Typically, mitigation is expected to occur on-site if possible, but off-site mitigation is allowed under some mitigation provisions.
3. Voluntary buffer plantings (or simply “riparian plantings”). Some landowners choose to plant riparian areas on their own for a variety of reasons, but often plantings occur on private land through the efforts of the landowner working voluntarily with non-governmental organizations or government agencies. Most such plantings are grant funded. Different grant sources have different minimum planting widths as well as standards for maintenance, species composition, etc.

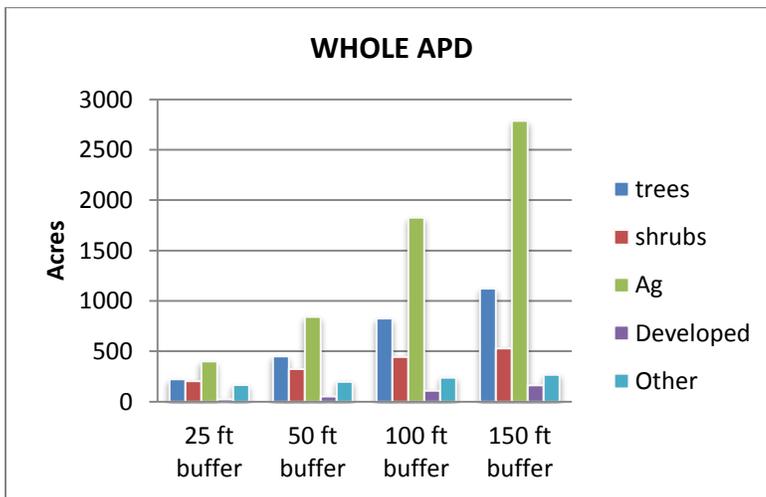
Total acres within buffer widths (25-150 ft). INCLUDES ALL STREAM SIZES.

	25ft buffer		50ft buffer		100ft buffer		150ft buffer	
	Acres	%	Acres	%	Acres	%	Acres	%
APD combined	1014	7	1864	13	3446	24	4868	33
North APD	670	7	1244	13	2318	25	3286	35
South APD	344	7	620	12	1128	22	1582	31

Key points:

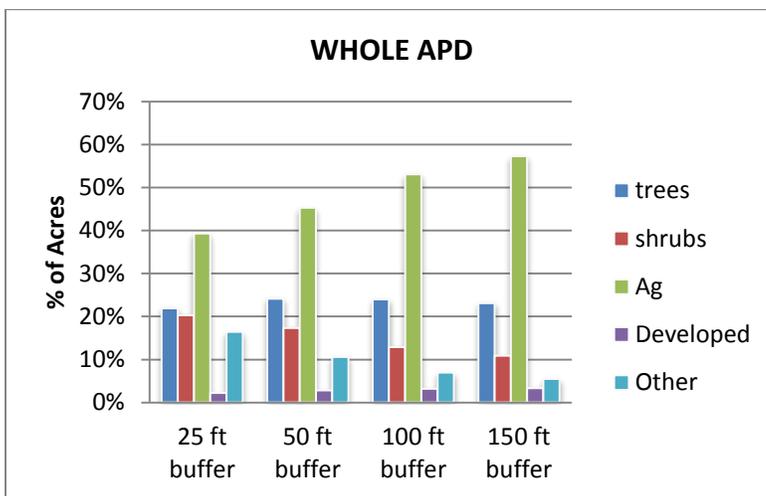
- Recall that total APD size is approximately 14,500 acres.
- Percentage of North and South APDs within each buffer width very similar. Reflects similar density of waterways.
- If every waterway were planted at 150 ft., one-third of APD would be unavailable for production due to buffers alone.

What is actually within the buffer zone?



Key points:

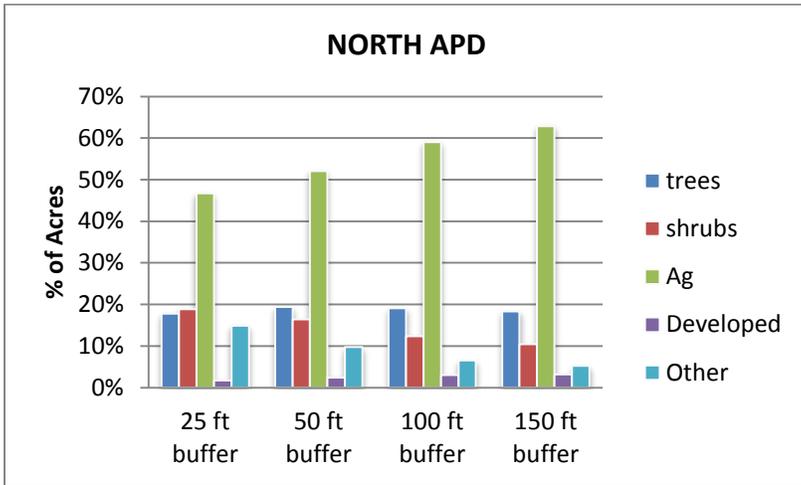
- As buffers get wider, the proportion of agricultural land affected increases.
- Almost 2800 acres of ag land lies within the 150 ft. buffer
- About 400 acres lies within the 25 ft buffer.



Key points:

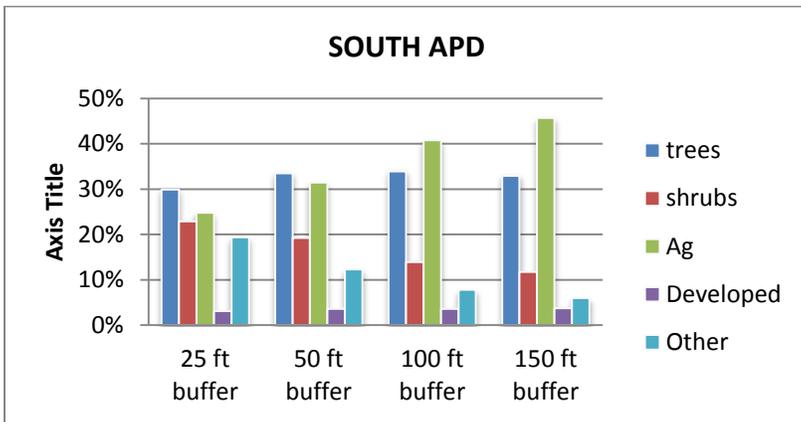
- Trees currently represent 22-24% of total buffer area at all widths.
- The percentage of buffer width in Ag increases from 39% to 57% as width increases from 25-150 ft.

North vs South APD



Key points:

- Agricultural land use is very prevalent in the buffer area in the North APD.
- Currently less than 20% trees in buffer zone.



Key points:

- Even at 150 ft buffers, less than half of buffer in Ag use.
- Trees more than 30 % of buffer in South APD regardless of width.

Soil Class Within Various Buffer Widths

25 ft.	Soil Class (lower is generally better)				
	Class 3	Class 4	Class 5	>Class 5	NULL
APD combined	33%	25%	28%	3%	11%
North APD	26%	28%	33%	3%	10%
South APD	46%	19%	19%	3%	13%

50 ft.	Soil Class (lower is generally better)				
	Class 3	Class 4	Class 5	>Class 5	NULL
APD combined	35%	25%	29%	3%	7%
North APD	28%	29%	34%	3%	7%
South APD	50%	18%	19%	3%	9%

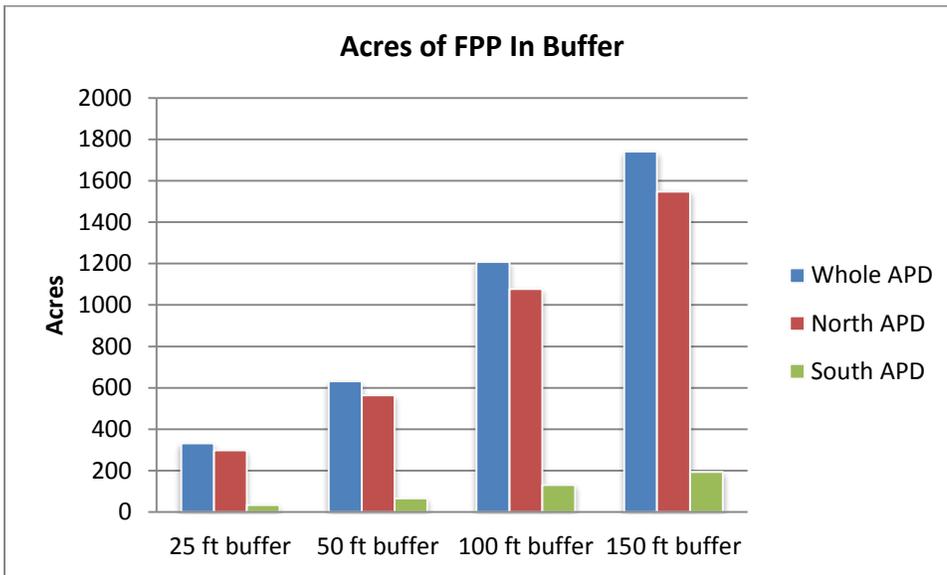
100 ft.	Soil Class (lower is generally better)				
	Class 3	Class 4	Class 5	>Class 5	NULL
APD combined	37%	25%	30%	3%	5%
North APD	29%	29%	35%	3%	4%
South APD	53%	18%	19%	3%	6%

150 ft.	Class 3	Class 4	Class 5	>Class 5	NULL
APD combined	38%	26%	30%	3%	4%
North APD	29%	29%	35%	3%	3%
South APD	55%	19%	18%	3%	5%

Key points:

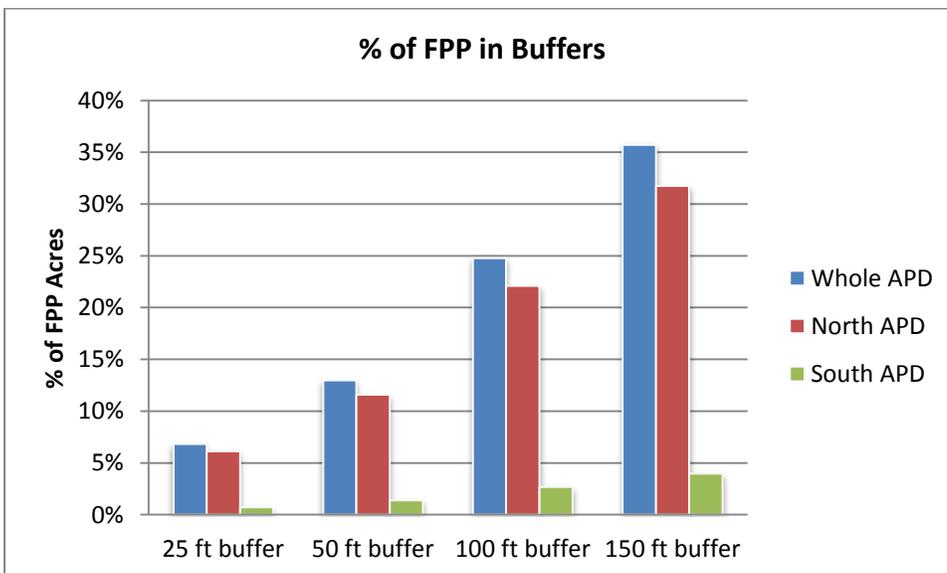
- Class 3 soils much more prevalent in South APD than in North, within all buffer widths.
- North APD has higher percentage of Class 5 soils than other soil types

Farmland Preservation Program lands within buffers



Key points:

- Very little of South APD within FPP program
- Most of the FPP land located in North APD



Key points:

- Over 35% of FPP lands within 150 ft buffer

Buffers by channel type

	25ft buffer	50ft buffer	100ft buffer	150ft buffer	SUM
Mainstem	159	317	628	886	2541
Large Tributaries*	65	129	264	369	
Small Tributaries	629	1219	2286	3193	
Oxbows	172	219	315	414	
Total	1024	1884	3493	4862	

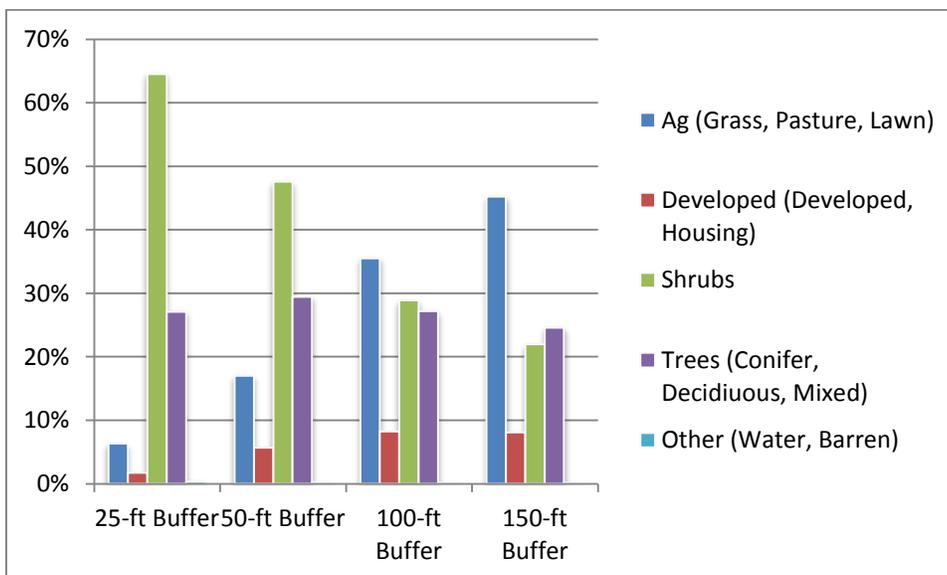
* Large tribs include Harris, Cherry, Ames, Patterson, Tuck, and Griffin Creeks

Acres by Channel Type				
	25ft buffer	50ft buffer	100ft buffer	150ft buffer
Mainstem	15.5%	16.8%	18.0%	18.2%
Large Tributaries*	6.4%	6.9%	7.6%	7.6%
Small Tributaries	61.4%	64.7%	65.4%	65.7%
Oxbows	16.8%	11.6%	9.0%	8.5%
Total	1.00	1.00	1.00	1.00

Key points:

- Vast majority of buffers associated with small tributaries (over 60%)
- See **YELLOW** example of how different widths can be combined to estimate impacts under various assumptions.

Land cover breakdown behind mainstem levees and revetments by buffer size



Key points:

- Less than 10% of the land within a 25 ft buffer behind levees or revetments is Ag.
- Percentage increases to roughly 45% for a 150 ft buffer