

# O'HARA TOWNSHIP

## Comprehensive Development Plan

### Chapter 10 - Development Constraints

#### GENERAL

Constraints to the development of the remaining land in O'Hara Township are primarily due to the presence of floodplains and steep slopes associated with a series of networked streams. This physiography has been a constant engineering concern to both private sector interests and to municipal officials since the Township began its formative development. As discussed in narratives summarizing previous planning efforts in Chapter 11, consultants have referenced hydrologic and topographic characteristics as significant problems to be dealt with on sites proposed for intense development.

On the western side of O'Hara Township, the Little Pine Creek Watershed, a subshed of the larger Pine Creek Watershed, has effectively prevented any significant development from occurring in the Township's northwestern quadrant. While Saxonburg Boulevard was constructed in this stream valley, the absence of land areas with less than a fifteen percent (15%) slope has resulted in this area remaining relatively undeveloped. Seitz Run and Guyasuta Run in the southwestern quadrant have also prevented development of parcels with hydric soils abutting these stream channels. Low density residential development has occurred in the southwestern quadrant where the sanitary sewer system has been extended from the Kittanning Pike and Lower Road corridors.

On the eastern side of the Township, the Powers Run Watershed presents similar constraints to development. With Glade Run in the northeastern quadrant and Squaw Run in the southeast, land forms between these water features exhibit slopes of more than twenty-five percent (25%) abutting Cornwall and portions of Sun Ridge Roads. However, development has occurred in areas with slopes between three and fifteen percent (3% & 15%) situated between these major stream corridors. Most of the developed land in the RIDC park exhibits slopes in the northern part of the site in the eight to fifteen percent (8% - 15%) range, while the southern part of the site includes land with slopes less than eight percent (8%).

#### UTILITIES

Almost all of the developed areas in the Township have access to public utilities. Sanitary sewers have been extended into all but the northernmost lots on both sides of the Township and follow existing road and street rights-of-way to the extent possible. Public water distribution systems have been introduced in these same rights-of-way and also provide residual pressure to hydrant systems for fire protection. Stormwater management facilities, or storm sewers, are also generally available in developed areas and have been required in new developments, whether

residential or nonresidential since the 1970's. The northwestern quadrant where the largest undeveloped area in the Township remains, is the exception as the need for public utilities has emerged to support development activities at this point.

**SOILS AND LANDSLIDE RISKS**

Other general constraints to development include soil characteristics and potential landslide risks. A series of thematic digital maps have been prepared for reference and areas identified with hydric soils which indicate the presence of wetlands, and areas susceptible to landslides based on both soil type and slope are included. On the western side of O'Hara Township, areas identified as having a high landslide risk are largely undeveloped including the northwest quadrant where the Little Pine Creek Watershed is situated. As development is proposed, this aspect of site preparation will need to be engineered carefully. While most of the developed land on the eastern half of the Township is considered at low risk for landslide, there are several contours in existing residential subdivisions along the southern perimeter that run through developed lots as well as segments of the SR 28 right-of-way.

**PENNSYLVANIA ENVIRONMENTAL COUNCIL, THREE RIVERS CONSERVATION PLAN, FINAL, MARCH 2004:**

A conservation plan focusing on riverfront properties and adjacent land forms was prepared in 2004 by the Pennsylvania Environmental Council for Allegheny County. O'Hara Township's municipal boundaries extend into the Allegheny River channel at the Highland Park Bridge, south of the Old Freeport Road right-of-way for approximately a mile and a half beginning at Lewis Avenue. These are the areas included in the PEC Conservation Plan for the preservation, redevelopment and conservation of riverfront properties in Allegheny County. Excerpts from the Conservation Plan relative to land in O'Hara Township follow:

- **Chapter 1, Project Area Characteristics**

- 10 miles northeast of Pittsburgh; 7.01 square miles; hilly, wooded; floodplains on Little Pine Creek and Allegheny River.
- The riverfront property consists of railroads, a private yacht club, houses and a new townhouse complex – The Cover at St. Charles.
- Population:

1970	1980	1990	2000	% Change from 70-20
9,209	9,233	9,096	8,856	(3.8)

- General Zoning and Planning for Municipalities:

Comprehensive Plan	Last Update of Comp Plan	Zoning Ordinances	Environmental Advisory Council
Yes	1993	Yes – riverfront zoned suburban manufacturing, conservation district, riverfront planned units	No

- Ownership of River Islands

Island	Ownership	Comments
Sixmile Island	Nancy Warner Park; also leased to a private club – Lazy Day Islanders Club	Donated to O’Hara Township thirty (30) years ago

- **Chapter 2, Land Resources**

- O’Hara Township has CD-1 and CD-2 Conservation District zoning “to protect environmentally sensitive areas of land, but on which minimal impact development can occur.” CD-1 zoned areas are lands with steep slopes and mature tree standards. CD-2 zoned areas are lands close to natural waterways. Under CD-2 zoning, there are riverfront unit developments “to utilize and enhance the amenities of the river and maintain, preserve, and make these natural assets to accessible to the general public.”
- Zoning Related to Land Issues:

Zoning for Riverfront Districts	Special Zoning Overlays	Own or County SALDO	Protection of Natural Areas	Conservation Zoning
Zoned as suburban manufacturing and conservation district with riverfront planned units	Public access to river is provided	Own	Yes	Encouraged

- Act 2 Clean-Up Sites:
  - Chapel Harbor Site
  - Portec Inc RMP Division (completed)
  - Papercraft Corporation (completed)
- Municipal Flood Control Initiatives:

Floodplain Zoning	Act 166	FEMA Insurance Available
National Flood Insurance Program minimum standards	Yes	Yes

- **Chapter 3, Water Recourses**

- Stormwater Policies for Municipalities

Act 167	For What Waters	Best Management Practices
Yes	Pine Creek, Squaw Run, Allegheny River Watershed	Encourages groundwater recharge via grass swales

- **Chapter 4, Biological Resources** (*O’Hara not mentioned – regional information only*)
- **Chapter 5, Recreational Resources**
  - *O’Hara Township Comprehensive Parks, Recreation and Open Space Plan – 2002 and Beyond.* A report on the current status of parks and open space and a plan for the future of parks in the community. The plan offers detailed information and maps on parks and their facilities, a summary of the public participation component, and recommendations for the parks system. Some of the goals of the plan are to enhance the trail system, develop the new riverfront park, protect natural areas, maintain quality sports fields, boost park usage, and coordinate and cooperate with surrounding communities.
  - River Access: Allegheny River

River Mile	Facility	Fuel	Restaurant	Groceries	Overnight Mooring	Lodging	Remarks
11.1 R	O’Hara Landing Boat Club 14 <sup>th</sup> River Road Pittsburgh, PA 15238	No	No	No	Yes	No	Private; motorized access only

- Fishing: Friends of the Riverfront is working on access points under the 40<sup>th</sup> Street Bridge on the Allegheny and waterfront areas in Fox Chapel and O’Hara.

**TERRAIN**

*The understanding of terrain is critical for a number of reasons.*

*The terrain of a region largely determines its suitability for human settlement: flatter, alluvial plains tend to be better farming soils than steeper, rockier uplands.*

*In terms of environmental quality, agriculture, and hydrology, understanding the terrain of an area enables the understanding of watershed boundaries, drainage characteristics, water movement, and impacts on water quality. Complex arrays of relief data are used as input parameters for hydrology transport models (such as the SWMM or DSSAM Models) to allow prediction of river water quality.*

*Understanding terrain also supports on soil conservation, especially in agriculture. Contour plowing is an established practice enabling sustainable agriculture on sloping land; it is the practice of plowing along lines of equal elevation instead of up and down a slope.*

*Terrain is militarily critical because it determines the ability of armed forces to take and hold areas, and to move troops and material into and through areas. An understanding of terrain is basic to both defensive and offensive strategy.*

*Terrain is important in determining weather patterns. Two areas close to each other geographically may differ radically in precipitation levels or timing because of elevation differences or a "rain shadow" effect.<sup>1</sup>*

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<sup>1</sup> Wikipedia Encyclopedia, [Understanding of Terrain](#)

**HYDRIC SOILS**

While there is no Hydric soil found in O'Hara Township, an area with hydric soil exists in the center of Fox Chapel Borough along Hunt Road near Squaw Run and Guyasuta Roads. Hydric soil is found in the northwestern part of the Borough in the northern part of the Stoney Camp Run Watershed. In the northeastern section of the Borough, hydric soil is found from Woodland Farms Road south to Squaw Run Road East. Soils with Hydric inclusions are found throughout O'Hara Township.<sup>2</sup>

**BIODIVERSE AREA (BDA)**



**Peregrine Falcon (*Falco peregrinus*)**  
 Threatened Species of Pennsylvania.  
 Harrisburg, PA: Wildlife Conservation Resource Fund, 1995.  
**Pennsylvania Endangered**  
**S1B (critically imperiled) G4 (apparently secure)**

	Quadrangle	Species
Allegheny River BDA – Recovering river system that provides habitats for a number of state listed animal species. River continues to be altered by human influences including effluent discharges, point source discharges, navigational locks and dams and dredging of river bed.	Braddock New Kensington West Pittsburgh East	SA001 SA002 SA003 SA004 SA005
<p>The present day Allegheny River has improved on some of its ecological qualities since the mid 1900's. It is presently classified as a low to medium quality warm water fishery and serves as a Special Species Habitat for SA001, SA002, SA003, SA004, and SA005. The presence of these fish suggests an improvement in the water quality of the river. It is unknown at this point in time how far ranging these species are, as well as what portions of the river are especially important to their survival. Collections made by the PA Fish and Boat Commission suggest that some of these species are using the entire length of the river in Allegheny County to some degree. Since this is the case, the entire river within the county has been designated the Allegheny River BDA. -Other indications of the improving water quality within the Allegheny exist. Three species of fish that were previously listed as species of special concern have been delisted because of their success in increasing their populations in the river to a sustainable level. A few other listed species, as well, are being monitored for their increasing populations and success at surviving in the river. Studies carried out by the PA Fish and Boat Commission suggest that the overall water quality for the Allegheny River has improved dramatically over the last 30 years (Lorson, 1990), enough so that a project to reintroduce a fish species of special concern into the Upper Ohio basin has been initiated. The paddlefish (<i>Polyodon spathula</i>) was part of the native fish fauna of the Allegheny and Ohio Rivers in Pennsylvania. Since it is a filter feeder and, therefore highly sensitive to water pollution, this species became extirpated from the Upper Ohio and Lake Erie portions of its range in the late 1800's and early 1900's as a result of the onset of the lock and dam navigation system, dredging, and deteriorated water quality in these systems. It is presently thought that the water quality of the Allegheny and Ohio has improved and will continue to improve to the point that</p>		

<sup>2</sup> O'Hara Township Trail Feasibility and Planning Project, April 2005.

	Quadrangle	Species
<p>reintroduction of the paddlefish will be successful.</p> <p>Places in the river that may well be important to the survival of the fish species of special concern, as well as the other sensitive species that are mentioned, include those areas representing more natural habitat (pre-lock and dam, dredging, and pollution) such as the islands and shoals in the river and those rocky, freer-flowing sections immediately downstream of the navigational dams. The dams aerate not only these areas of the river, which is important for fish survival, but they mimic pre-dam currents of the natural free river. One example of such island habitat in this part of the county is Jacks Island which is situated in the lower portion of this quadrangle on the Westmoreland side of the river. Although the presence of these fish species of special concern may represent some recovery of the river, not enough information is available to determine their success. More research on these species and others is needed for the river. Protection of the Allegheny River BDA to encourage the continuance of existing attributes, improved water quality and the reintroduction of other native plants and animals is needed. This will mean continued and more stringent restrictions and regulations placed on industrial, residential, and commercial activities and development along the river and its tributary streams. Careful monitoring and enforcement of regulations concerning all activities on and along the river is recommended. Since the Allegheny River is already provided by the original topographic map and not enough data is available to draw accurate boundaries for the BDA, additional lines are not provided for this site and the entire river within the county is included as part of the BDA. It should be noted, however, that the majority of the collection sites for the species of special concern are located in the vicinity of Lock and Dam #2 and #3, the river islands and the mouths of some major tributaries. All are areas where the river most resembles its historic condition of a free-flowing river.</p>		
<p>Camp Guyasuta – see Guyasuta Run Valley BDA</p>	<p>Glenshaw</p>	<p>NC004 NC005</p>
	<p>Pittsburgh East</p>	<p>Managed Land</p>
<p>To the west of Stony Camp and Squaw Run is Guyasuta Run. A large portion of this valley is known as Camp Guyasuta and is owned and managed by the Boy Scouts of America. This valley, with the exception of some of the bottomland in the lower half of the valley remains forested. The fact that a nearly mature forest has survived the pressures of residential development is surprising. Presently, the Guyasuta Run Valley BDA is recognized for its qualities as a High Diversity Area, which is represented by two county significant examples of natural communities. Most of the eastern slope in this valley from Route 28 to Hunt Road is covered with a Dry-Mesic Acidic Central Forest Community (NC004) characterized by a mature canopy of red oak, white oak, black oak (<i>Quercus velutina</i>), and American beech (<i>Fagus grandifolia</i>), a shrub/sub-canopy layer of spicebush (<i>Lindera benzoin</i>), witch-hazel (<i>Hamamelis virginiana</i>), mapleleaf viburnum (<i>Viburnum acerifolium</i>), American beech saplings, scattered mountain laurel (<i>Kalmia latifolia</i>) and an herbaceous layer of forked chickweed (<i>Paronychia canadensis</i>), blueberry (<i>Vaccinium</i> sp.), and mosses. Much of the canopy is occupied by mature trees and the sub-canopy and shrub layer is fairly dense in some parts of the site. At the upper end of the site where small tributary ravines have formed on the east side of the stream, small patches of a Northern Hardwoods Forest Community (NC005) exist. Regenerating eastern hemlock (<i>Tsuga canadensis</i>) and American beech dominate the canopy and understory, as well as other species such as birch (<i>Betula</i> sp.), white oak and basswood. It is expected that much of the maturing western slopes in this valley have qualities similar to NC004 and NC005. Guyasuta Run itself is recognized as a high quality-warm water fishery (D.E.R., 1992a). This stream takes on an interesting character in that it cuts a deep ravine, characteristic of large river tributary streams. As a result of the down-cutting and meandering nature of the stream, the lower slopes have many layers of exposed bedrock which serve as microhabitats for certain plants and animals in the valley and thus add to the overall biological diversity of the site.</p>		
<p>Some of the problems or disturbances faced by this site include the construction of a sewer line which runs down through the stream bed and alters the flow of Guyasuta Run, residential development on the upland areas and the</p>		

	Quadrangle	Species
<p>disturbance associated with that type of development (i.e., mowed lawns and cleared areas to the lip of the slope, erosion on the upper slope, dumping into the forest, exotic species along the edge of the development and the forest, etc.), development on the floodplain and lower slopes in the bottom half of the valley that comprises the scout's Camp Guyasuta (swimming pool, cabins, roads, etc.), and logging. Since this site represents some unique natural features for the county its protection is important. Presently, the forested slopes and valley bottom are not well buffered from development activity in the upland. Much of the development related to the Boy Scout camp results in a high degree of fragmentation and disturbance to NC004. This is indicated somewhat by the increase in weedy and exotic species such as wild grape (<i>Vitis</i> sp.) and garlic mustard (<i>Alliaria officianalis</i>) in the forest at the lower elevations.</p> <p>If the natural qualities of the site are to be maintained and improved, then an evaluation of the impact of land use in both the upland and in the area of the Boy Scout Camp is needed. The threats posed by these land uses to the natural qualities of the valley may need to be eliminated or minimized in order to protect the forest and stream in this BDA. Because the site is relatively small and completely surrounded by development it has little potential to expand in size, therefore, it is critical that the existing qualities of the site be maintained or improved by eliminating the threat of further disturbances.</p>		
<p>Campbell Run Slopes BDA – Relatively large, forested stream valley exhibiting a recovering Mesic Central forest community</p>	<p>New Kensington West</p>	<p>NC011</p>
<p>The watershed bordering Deer Creek to the southwest is recognized as the Campbell Run Valley BDA. The forested slopes along Campbell Run and in parts of Guys Run have high significance as a High Diversity Area. The site's importance to the natural heritage of Allegheny County lies in the fact that it is a relatively large tract of maturing Mesic Central Forest (NC011) in an otherwise highly developed portion of the county. Diversity on the slopes is relatively high as a result of the variety of aspects, elevational ranges, soils, etc. The composition of NC011 changes as these conditions change and in some cases, especially in the small protected, steep walled valleys. NC011 is quite mature. In general, composition of the forest canopy includes red oak, white oak, sugar maple, American beech, and white ash. Spicebush (<i>Lindera benzoin</i>), mapleleaf viburnum (<i>Viburnum acerifolium</i>) and witch-hazel (<i>Hamamelis virginiana</i>), characterize the understory, while species such as mayapple (<i>Podophyllum peltatum</i>), Christmas fern (<i>Polystichum acrostichoides</i>), and wood fern (<i>Dryopteris</i> sp.) represent the ground layer. Lack of a highly diverse herbaceous layer may be attributed to the selective logging that has taken place in parts of this forest. Diversity is higher in those areas that have been more protected from such activity. Logging continues to threaten the site since many trees are presently sizable. Another threat to the site is the residential development that is occurring in the upland areas to the southwest of the Campbell Run valley. A highly disturbed edge on the upper slopes has resulted in the introduction of nonnative or weedy species, such as garlic mustard (<i>Alliaria officianalis</i>), multi-flora rose (<i>Rosa multi-flora</i>), poison ivy (<i>Rhus radicans</i>), and wild grape (<i>Vitis</i> sp.). These species out-compete and make conditions unsuitable for native vegetation. Related to this present development are disturbances that are caused by sewer line and power line construction in the valley which fragments the forest, groundwater infiltration that results in an alteration of the hydrology on the slopes and thus causes a change in vegetation composition, and construction of new roads. Presently, a proposal exists to build a road that would traverse the Campbell Run valley bottom for part of its length, as well as the slopes in order to accommodate residents in the upland housing development. Such a road would permanently alter the natural qualities of the Campbell Run Valley BDA by fragmenting NC011. For more discussion of the threats resulting from development and utility and road right-of-ways, see the Land-Uses and Potential Impacts to Natural Heritage Areas section.</p> <p>If the natural qualities of the BDA are to continue to recover and be sustained into the future, this area needs to be protected. Logging within the boundaries of the site could severely damage the natural qualities of the forest and streams. Fragmentation of the site by future development such as housing, roads, and utility right-of-ways could be reduced if such development is limited to presently developed areas outside of the BDA lines and utility lines follow</p>		

	Quadrangle	Species
existing right-of-ways. Finally, NC011 can best be protected if left untouched and if an adequate buffer zone (included within the BDA lines) is maintained.		
Guyasuta Run Valley – Small valley representing a mature Dry-Mesic Acidic Central Forest and a Northern Hardwoods Forest Community.	Glenshaw	NC004 NC005
	Pittsburgh East Quadrangle	NC001 NC002
The Guyasuta Run Valley BDA extends onto the northern portion of this quadrangle in the vicinity of Sharpsburg and includes Camp Guyasuta, a managed land owned by the Boy Scouts of America. This valley is noted for the significant example of natural forest communities (NC001 and NC002) that it exhibits on its eastern and western slopes and valley bottom. Since the majority of the site is situated on the Glenshaw quadrangle, a full description can be found on under Camp Guyasuta.		
Source: <a href="http://www.paconserve.org/rc/pdfs/alleggheny-co-final1-cd.pdf">http://www.paconserve.org/rc/pdfs/alleggheny-co-final1-cd.pdf</a>		

**SUMMARY**

Chapter 10 focuses on environmental assets as well as direct constraints to development. Direct constraints to development include steep slopes within undeveloped areas which are briefly described within the Little Pine Creek and Powers Run Watersheds and are described in greater detail in summaries of past planning efforts described in Chapter 11.

Almost all of the developed areas in the Township have access to public utilities. Sanitary sewers have been extended into all but the northernmost lots on both sides of the Township and follow existing road and street rights-of-way to the extent possible. Public water distribution systems have been introduced in these same rights-of-way and also provide residual pressure to hydrant systems for fire protection.

Stormwater management facilities, or storm sewers, are also generally available in developed areas and have been required in new developments, whether residential or nonresidential since the 1970’s. The northwestern quadrant where the largest undeveloped area in the Township remains, is the exception as the need for public utilities has not emerged to support development activities at this point.

Chapter 10 cites related work and research done by the Pennsylvania Environmental Council, Three Rivers Conservation Plan of March 2004. The plan focused on riverfront properties and adjacent land forms and was prepared for Allegheny County. Excerpts from the Conservation Plan relative to land in O’Hara Township are enumerated in Chapter 10 including an examination of current riverfront conservation zoning employed by the Township and points planned for public fishing access to the Allegheny River.

Several Bio-Diversity Areas exist within the Township, including areas along the Allegheny River, the Camp Guyasuta Area with mature tree canopies, and Campbell Run Slopes with wooded slopes and unique ferns and undergrowth.

Methods of preservation within future development are discussed in Chapter 9, Current and Future Land Use.