DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

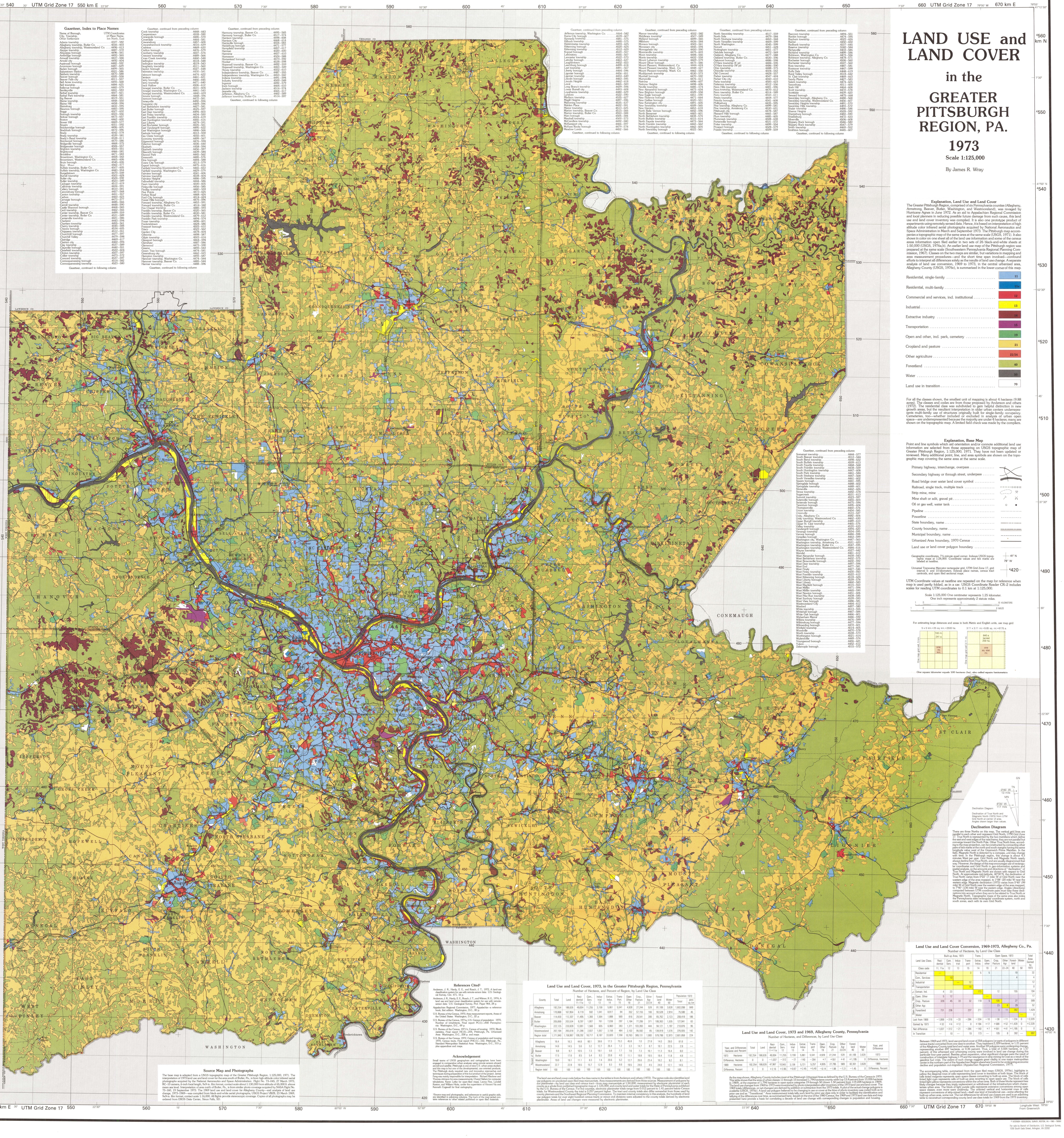
PREPARED IN COOPERATION WITH THE
APPALACHIAN REGIONAL COMMISSION

LAND USE IN THE GREATER PITTSBURGH REGION
MAP I–1248

LAND USE and LAND COVER in the GREATER PITTSBURGH REGION, PA. 1973

Scale 1:125,000

By James R. Wray



Gazetteer, Index to Place Names

Name of Borough, City, Township, Other Settlement	UTM Coordinates of Place Name, km North, East
Adams township	4507–582
Allegheny township, Butler Co.	4556–603
Allegheny township, Westmoreland Co.	4496–613
Aleppo township	4487–572
Aliquippa borough	4496–561
Ambridge borough	4493–565
Amwell township	4437–566
Arnold city	4492–604
Aspinwall borough	4483–592
Avonmore borough	4487–629
Baden borough	4499–565
Bakerstown Station	4501–586
Baldwin township	4470–588
Beaver borough	4505–558
Beaver Falls city	4511–557
Bell Acres township	4493–568
Bell township	4484–625
Bellevue borough	4483–579
Bentleyville	4441–583
Bethel township	4507–621
Bethel Park township	4464–581
Big Beaver	4519–551
Blaine township	4448–550
Blaine Hill	4458–596
Blainsburg	4432–595
Blawnox borough	4483–595
Boggs	4527–632
Borough township	4503–556
Bolivar borough	4473–657
Boston	4462–600
Bower Hill	4469–577
Boyers	4551–592
Brackenridge borough	4496–605
Braddock borough	4472–596
Brady	4542–578
Brady township	4539–581
Brady's Bend township	4538–611
Brentwood borough	4470–586
Bridgeville borough	4468–575
Bridgewater borough	4506–557
Brighton township	4505–551
Brightwood	4466–581
Brookline	4471–583
Browntown, Washington Co.	4458–543
Browntown, Westmoreland Co.	4465–606
Bruin borough	4545–606
Bryn Mawr	4462–577
Buffalo township, Butler Co.	4507–605
Buffalo township, Washington Co.	4443–554
Burgettstown	4470–549
Burrell township	4503–628
Butler city	4524–592
Butler township	4523–589
Cadogan township	4512–619
California township	4434–591
Callery borough	4510–581
Canonsburg borough	4457–568
Canton township	4451–557
Carbon	4460–623
Carnegie borough	4473–577
Carnot	4485–566
Carroll township	4448–590
Castle Shannon borough	4468–583
Cecil township	4462–566
Center township, Beaver Co.	4499–559
Center township, Butler Co.	4531–589
Centerville township	4431–586
Charleroi	4443–594
Chartiers township	4455–561
Cherry township	4545–588
Chicora borough	4534–605
Chippewa township	4512–551
Churchhill borough	4477–597
Churchill Valley	4479–598
Clairidge	4469–617
Clairton city	4460–594
Clay township	4537–589
Claysville borough	4440–551
Clearfield township	4522–604
Clinton township	4507–597
Collier township	4473–572
Concord township	4537–597
Connoquenessing borough	4518–582
Connoquenessing township	4523–580

Gazetteer, continued to following column

Gazetteer, continued from preceding column

Cook township	4448–643
Cooperstown	4508–590
Coraopolis borough	4485–570
Coverdale	4464–581
Cowansburg	4457–608
Cowanshannock township	4516–639
Crabtree	4469–630
Crafton borough	4476–579
Cranberry township	4507–574
Crescent township	4489–564
Cross Creek township	4460–548
Darlington	4518–548
Darlington township	4519–543
Daugherty township	4511–560
Dayton borough	4527–648
Deemston township	4430–581
Delmont borough	4474–622
Denison	4461–631
Derry borough	4466–645
Derry township	4471–640
Dock Hollow	4506–612
Donegal township, Butler Co.	4531–604
Donegal township, Washington Co.	4441–543
Donegal township, Westmoreland Co.	4440–639
Donora borough	4448–596
Dormont borough	4472–581
Dorseyville	4492–594
Duquesne city	4469–596
East Bethlehem township	4427–581
East Butler borough	4525–597
East Deer township	4494–603
East Finley township	4434–550
East Franklin township	4524–619
East Huntingdon township	4445–616
East Liberty	4479–591
East Rochester borough	4505–561
East Vandergrift borough	4495–622
East Washington borough	4446–566
Eastvale borough	4513–558
Eau Claire borough	4555–601
Economy township	4499–567
Edgewood borough	4476–594
Elderton borough	4506–640
Elizabeth	4458–594
Elizabeth township	4456–597
Ellsworth borough	4439–584
Elwood Park	4445–562
Emsworth	4485–576
Etna borough	4484–588
Evans City borough	4513–579
Export borough	4475–616
Fairfield township, Westmoreland Co.	4465–653
Fairfield township, Washington Co.	4429–579
Fairview borough	4541–606
Fairview township	4538–604
Fairview Heights	4486–595
Fallowfield township	4444–586
Fawn township	4500–605
Finleyville borough	4456–585
Findlay township	4480–559
Five Points	4473–625
Forbes Road	4468–626
Ford City borough	4514–624
Forest Hills borough	4475–596
Forward township, Allegheny Co.	4453–591
Forward township, Butler Co.	4514–582
Fox Chapel township	4485–593
Franklin township, Beaver Co.	4520–565
Franklin township, Butler Co.	4530–581
Franklin township, Westmoreland Co.	4479–612
Franklin Park township	4494–574
Frazer township	4496–601
Fredericktown	4428–586
Freeport borough	4503–610
Frisco	4522–562
Garden City	4478–604
Gibsonia	4498–587
Gilpin township	4503–616
Glassport borough	4464–594
Glenshaw	4487–586
Glenwood	4473–590
Greene	4493–543
Green Tree borough	4474–581
Greensburg city	4462–623
Hampton township	4493–587
Hanover township, Washington Co.	4474–544
Hanover township, Beaver Co.	4485–544
Harmar township	4488–596

Gazetteer, continued to following column

Gazetteer, continued from preceding column

Harmony township, Beaver Co.	4495–565
Harmony borough, Butler Co.	4517–574
Harrison township	4498–608
Harrison City	4468–614
Harrisville borough	4554–583
Heidelburg borough	4471–577
Hempfield township	4457–617
Herman	4320–600
Herminie	4457–610
Homeacre	4524–588
Homestead borough	4473–592
Hooker	4538–598
Hopewell township, Beaver Co.	4492–559
Hopewell township, Washington Co.	4453–549
Hovey township	4552–610
Independence township, Beaver Co.	4487–555
Independence township, Washington Co.	4453–542
Indiana township	4491–594
Industry township	4500–548
Ingomar	4492–579
Irwin borough	4464–610
Jackson township	4514–574
Jeanette city	4465–617
Jefferson, Allegheny Co.	4462–589
Jefferson township, Butler Co.	4514–597

Gazetteer, continued to following column

Gazetteer, continued from preceding column

Jefferson township, Washington Co.	4464–542
Karns City borough	4539–607
Kennedy township	4481–575
Kilbuck township	4485–575
Kiskiminetas township	4493–625
Kittanning borough	4520–624
Kittanning township	4512–629
Koppel borough	4520–557
Laboratory	4445–567
Lancaster township	4522–573
Latrobe borough	4463–637
Laughlintown	4452–653
Leechburg borough	4499–618
Leet township	4491–567
Liberty borough	4464–596
Ligonier borough	4456–651
Ligonier township	4453–649
Lincoln borough	4463–595
Lincoln Heights	4462–618
Local	4465–583
Long Branch township	4439–594
Lower Burrell city	4493–608
Loyalhanna township	4480–629
Lyndora	4522–590
Madison township	4535–627
Magill Heights	4497–596
Mahoning township	4535–637
Malden Place	4432–591
Manor township	4513–625
Marion township, Beaver Co.	4515–566
Marion township, Butler Co.	4553–588
Mars borough	4505–584
Marshall township	4500–573
McCandless township	4492–580
McKeesport city	4466–597
McKees Rocks borough	4479–578
Meadow Lands	4452–566

Gazetteer, continued to following column

Gazetteer, continued from preceding column

Mercer township	4552–582
Middlesex township	4507–589
Midland borough	4499–545
Millsboro	4436–584
Monaca borough	4503–561
Monessen city	4445–594
Monogahela city	4450–590
Monroeville township	4475–603
Moon township	4484–566
Morris township	4432–558
Mount Lebanon township	4469–579
Mount Oliver borough	4473–586
Mount Pleasant, Westmoreland, Co.	4444–624
Mount Pleasant township, West., Co.	4448–627
Mount Pleasant township, Wash. Co.	4462–556
Muddycreek township	4530–573
Munhall borough	4470–592
Murrysville	4476–611
Natrona	4496–607
Natrona Heights	4498–606
Neville township	4485–574
New Alexandria borough	4473–634
New Brighton borough	4509–558
New Eagle borough	4451–590
New Florence borough	4471–664
New Galilee borough	4520–551
New Kensington city	4491–605
New Sewickley township	4509–565
New Stanton	4453–618
North Belle Vernon borough	4442–596
North Bessemer	4483–601
North Bethlehem township	4438–574
North Buffalo township	4515–614
North Fayette township	4473–564
North Franklin township	4443–562
North Huntingdon township	4462–604
North Sewickley borough	4522–561

Gazetteer, continued to following column

Gazetteer, continued from preceding column

North Sewickley township	4517–559
North Side	4479–584
North Strabane township	4453–568
North Versailles township	4469–599
North Washington	4545–599
Norvelt	4451–628
Nottingham township	4451–577
Oakdale borough	4472–569
Oakland, Allegheny Co.	4477–588
Oakland township, Butler Co.	4530–596
Oakmont borough	4486–598
O'Hara township (E pt)	4484–595
O'Hara township (W pt)	4486–590
Ohio township	4488–575
Ohioville township	4504–543
Old Concord	4428–557
Parker township	4547–604
Parker City city	4550–610
Parks township	4500–623
Patterson township	4512–556
Penn Hills township	4481–596
Penn township, Westmoreland Co.	4470–612
Penn township, Butler Co.	4514–589
Perry township	4543–611
Peters township	4458–577
Petrolia borough	4541–608
Phillipsburg	4435–595
Pine township, Allegheny Co.	4499–581
Pine township, Armstrong Co.	4530–631
Pittsburgh city	4478–587
Pleasant Hills borough	4465–587
Plum township	4485–605
Plumcreek township	4508–638
Portersville borough	4531–572
Potter township	4499–554
Prospect borough	4528–579
Pulaski township	4509–559

Gazetteer, continued to following column

Gazetteer, continued from preceding column

Raccoon township	4494–551
Rankin borough	4474–595
Rayburn township	4522–626
Rector	4450–650
Redbank township	4537–645
Reserve township	5582–584
Richeyville	4433–585
Richland township	4499–586
Robinson, Washington Co.	4473–556
Robinson township, Allegheny Co.	4478–571
Rochester borough	4506–560
Rochester township	4507–560
Ross township	4487–581
Rostraver township	4447–599
Ruffs Dale	4448–619
Rural Valley borough	4518–642
St. Clair township	4469–663
Sandy Plains	4427–583
Salem township	4474–625
Saxonburg	4511–600
Scab Hill	4464–608
Scott township	4472–578
Scottdale	4439–620
Seward borough	4475–668
Sewickley borough, Allegheny Co.	4488–568
Sewickley township, Westmoreland Co.	4456–607
Sewickley Heights township	4491–570
Sewickley Hills township	4493–572
Shaler township	4486–586
Shanor Heights	4528–592
Sharpsburg borough	4483–590
Shieldsburg	4472–633
Silverville	4506–608
Slippery Rock borough	4546–580
Slippery Rock township	4547–579
Smith township	4469–552
Smithton borough	4445–607

Gazetteer, continued to following column

Gazetteer, continued from preceding column

Somerset township	4444–577
South Beaver township	4512–544
South Bend township	4498–632
South Buffalo township	4509–613
South Fayette township	4468–568
South Franklin township	4438–559
South Huntingdon township	4447–608
South Park township	4461–584
South Strabane township	4447–568
South Versailles township	4461–602
Speers borough	4441–595
Springdale borough	4488–602
Springdale township	4489–601
Stonevilla	4462–626
Stowe township	4482–578
Sugarcreek	4531–613
Summit township	4523–597
Sutersville borough	4455–603
Swissvale borough	4475–594
Tarentum borough	4495–604
Thompsonville	4460–576
Union township	4454–585
Unionville	4533–587
Unity, Allegheny Co.	4482–604
Unity township, Westmoreland Co.	4462–630
Upper Burrell township	4489–610
Upper St. Clair township	4465–576
Valley township	4520–633
Vandergrift borough	4494–620
Venango township	4554–595
Verona borough	4484–598
Versailles borough	4463–599
Washington city, Washington Co.	4447–563
Washington township, Armstrong Co.	4531–620
Washington township, Butler Co.	4547–595
Washington township, Westmoreland Co.	4484–616
Wayne township	4527–642
Wendel	4461–612
West Alexander borough	4438–543
West Bethlehem township	4432–575
West Brownsville borough	4430–592
West Deer township	4497–594
West End	4477–581
West Finely	4427–546
West Finley township	4430–543
West Franklin township	4522–612
West Kittanning borough	4518–624
West Liberty borough	4539–578
West Library	4460–583
West Mayfield borough	4515–553
West Mifflin	4471–594
West Mifflin township	4465–590
West Newton borough	4451–606
West Pike Run township	4438–585
West Sunbury borough	4539–593
West View borough	4486–581
Westmoreland City	4464–612
Wexford	4497–580
White township	4513–555
Whitehall borough	4467–584
White Oak borough	4466–601
Wickerham Manor	4446–592
Wilkins township	4476–599
Wilkinsburg borough	4477–594
Wilmerding borough	4472–601
Winfield township	4514–605
Woodville	4470–578
Worth township	4538–573
Worthington borough	4521–614
Wylandville	4449–574
Youngwood borough	4455–621
Yukon	4452–612
Zelienople borough	4515–572

Explanation, Land Use and Land Cover

The Greater Pittsburgh Region, comprised of six Pennsylvania counties (Allegheny, Armstrong, Beaver, Butler, Washington, and Westmoreland), was ravaged by Hurricane Agnes in June 1972. As an aid to Appalachian Regional Commission and local planners in reducing possible future damage from such cause, this land use and land cover inventory was compiled. It is also one prototype product of experiments using remotely sensed data. Hence, it is based on interpretation of high altitude color infrared aerial photographs acquired by National Aeronautics and Space Administration in March and September 1973. The Pittsburgh map accompanies a topographic map of the same area at the same scale (USGS, 1971). It also shows in color on one sheet all of the land use information and some of the census areas information open filed earlier in two sets of 26 black-and-white sheets at 1:50,000 (USGS, 1976a,b). An earlier land use map of the Pittsburgh region was prepared at the same scale (Southwestern Pennsylvania Regional Planning Commission, 1967). Classes on the two maps are similar, but variations in mapping and area measurement procedures—and the short time span involved—confound efforts to interpret all differences solely as the results of land use change. A separate analysis of land use conversion, 1969 to 1973, in the central urbanized area, Allegheny County (USGS, 1976c), is summarized in the lower corner of this map.

Residential, single-family	11
Residential, multi-family	11a
Commercial and services, incl. institutional	12
Industrial	13
Extractive industry	14
Transportation	15
Open and other, incl. park, cemetery	19
Cropland and pasture	21
Other agriculture	22/24
Forestland	40
Water	50
Land use in transition	70

For all the classes shown, the smallest unit of mapping is about 4 hectares (9.88 acres). The classes and codes are from those proposed by Anderson and others (1972). The residential class was subdivided to gain helpful distinction in new growth areas, but the resultant interpretation in older urban centers underrepresents multi-family use of structures originally built for single-family occupancy. Cemeteries, too—whether included or excluded in analysis of urban open space—are underrepresented because the majority are under 4 hectares; many are shown on the topographic map. A limited field check was made by the compilers.

Explanation, Base Map

Point and line symbols which aid orientation and/or connote additional land use information are selected from those appearing on USGS topographic map of Greater Pittsburgh Region, 1:125,000, 1971. They have not been updated or reviewed. Many additional point, line, and area symbols are shown on the topographic map covering the same area at the same scale.

Primary highway, interchange, overpass
Secondary highway or through street, underpass
Road bridge over water land cover symbol
Railroad, single track, multiple track
Strip mine, mine
Mine shaft or adit, gravel pit
Oil or gas well, water tank ○ ●
Pipeline
Powerline
State boundary, name
County boundary, name
Municipal boundary, name
Urbanized Area boundary, 1970 Census
Land use or land cover polygon boundary

Geographic coordinates, 7½-minute quad corner. Indexes USGS topographic maps at 1:24,000. Coordinate values and tick marks are labeled at neatline. 41° N 79° W

Universal Transverse Mercator rectangular grid, UTM Grid Zone 17, grid interval 5- and 10-kilometers. Indexes place names, census tract centroids, and open filed sectional maps. 4420

UTM Coordinate values at neatline are repeated on the map for reference when map is used partly folded, as in a car. USGS Coordinate Reader CR–2 includes scales for reading UTM coordinates to 0.1 km at 1:125,000.

Scale 1:125,000 One centimeter represents 1.25 kilometer.
One inch represents approximately 2 statute miles.

1 0 5 10 KILOMETERS
1 0 3 6 MILES

For estimating large distances and areas in both Metric and English units, use map grid:

5 x 5 km.=25 sq. km.=2500 ha. — 100 m. 241 a. — one sq. km. — One map grid cell, 5 km.

3.11 x 3.11 mi.=9.65 sq. mi.=6175 a. — 640 a (acres) 259 ha. — one sq. stat. mi. — One map grid cell 3.11 mi.

One square kilometer equals 100 hectares (ha), also called square hectometers

GN
TN
0°45′ W
13 mils
MN
6°35′ W
117 mils

Declination Diagram

Declination of True North and Magnetic North (1973) from UTM Grid North at center of area. Angles drawn larger than values.

Declination Diagram

There are three Norths on this map. The vertical grid lines are parallel to each other and represent Grid North, UTM Grid Zone 17. True North is represented by the two meridians which define the east and west edges of the neat frame; they are not parallel but converge toward the North Pole. Other True North lines, according to the map projection, can be constructed by connecting other pairs of tick marks at the north and south margins having the same longitude value west of the Greenwich Prime Meridian. In the field, Magnetic North is detected by a compass, and may change with time. In the Pittsburgh region, this change is about 4.3 minutes West per year. Grid North and Magnetic North nearly always decline from True North, and are usually diagrammed that way. However, the design of this map encourages use of rectangular coordinates and Grid North in geo-information systems and spatial analysis, so the amounts and directions of "declination" of True North and Magnetic North are shown with respect to Grid North. At approximate mid-latitude, 40°30′N, the declination of True North varies from 0°22′ (7 mils) W of Grid North near the western edge of the area mapped, to 1°08′ (20 mils) W near the eastern edge. Magnetic declination (1973) varies from 5°40′ (99 mils) W of Grid North near the western edge of the area mapped, to 7°40′ (136 mils) W near the eastern edge. Angles (directions) computed between UTM coordinate pairs must take these declinations into account when they are to be related to True North or Magnetic North. Topographic maps of the same area also index the Pennsylvania state rectangular coordinate system, north and south zones, each with its own Grid North.

Land Use and Land Cover Conversion, 1969-1973, Allegheny Co., Pa.

Number of Hectares, by Land Use Class

		Built-up Area, 1973				Trans.	Open Space, 1973					Total Area Gained by 1973
	Land Use Class.	Residential	Com. Serv.	Industrial	Transport	Extrac. Indus.	Open, other	Crop, Pasture	Other Agr.	Forest-land	Water	
	Class code	11, 11a	12	13	15	14	19	21	22–24	40	50	
Built-up	Residential	—			3	5	5			19		32
	Com., Services		10							4		4
	Industrial			—	12							12
	Transportation				19							0
Tr.	Extract. Ind.	4	23			173		12		155		194
Open Space, 1969	Open, Other	5	12				—					17
	Crop., Pasture	329	45	33	32	118	5	105		27		589
	Other Agr.							23	8	29		52
	Forestland	731	236		237	211		3	11	382		1,429
	Water										—	0
Lost from 1969		−1,069	−316	−33	−284	−334	−10	−38	−11	−234	0	−2,329
Gained by 1973		+32	+4	+12	0	+194	+17	+589	+52	+1,429	0	+2,329
Net difference		−1,037	−312	−21	−284	−140	+7	+551	+41	+1,195	0	0
In Transition		—	10	—	19	173	—	105	8	382	—	697

Between 1969 and 1973, land use and land cover of 354 polygons (or parts of polygons in different census tracts) converted from one class to another. They represent 2,329 hectares, or 1.21 percent of the Allegheny County total land and water area. Another 59 polygons were undergoing change, representing another 697 hectares, or 0.36 percent. Thus, a total of 3,026 hectares, or 1.57 percent, of this urbanized and urbanizing county were involved in land use change during this particular four-year period. Besides urban expansion, other significant changes were the result of construction of interstate highway I-79 and the resurgence in strip mining for coal as a result of the gasoline fuel crisis. The extent of such change suggests great vitality in one major metropolitan center in the northern part of the Appalachian Region elsewhere found to be undergoing economic decline and population out-migration (Appalachian Regional Commission, 1977).

The accompanying table, summarized from the open filed maps (USGS, 1976c), highlights in yellow the diagonal rows of cells representing land cover in transition at both times. The block of cells tinted magenta represents open space classes converting to built-up area. The block of cells tinted light cyan represents cells of built-up area reverting to open space use. The block of cells tinted light yellow represents conversions within the urban area. Both of these blocks represent less likely changes because they imply replacement or withdrawal of the infrastructure which characterizes urban area. The block of light purple cells represents extensive conversions among open space classes; even more were underway. The untinted vertical and horizontal rows of cells represent conversions of strip-mined land—itself one kind of transitional use—some affecting the built-up urban area, some not. The net differences for all land use classes are used in an adjoining table to reconstruct corresponding county land use class totals for 1969 from the 1973 inventory.

Land Use and Land Cover, 1973, in the Greater Pittsburgh Region, Pennsylvania

Number of Hectares, and Percent of Region, by Land Use Class

	County	Total	Land	Residential 11–11a	Com., Serv. 12	Industrial 13	Extrac. Indus. 14	Trans-Port. 15	Open Other 19	Crop., Pasture 21	Other Agr. 22/24	Forest land 40	Water 50	Population 1970 Total	Population 1970 pers sq km
Hectares	Allegheny	192,254	188,626	49,004	11,255	3,159	5,861	5,541	4,928	27,244	528	81,106	3,628	1,602,098	849
	Armstrong	170,868	167,954	6,119	592	1,041	8,917	84	352	57,155	166	93,528	2,914	75,590	45
	Beaver	114,430	112,307	11,495	1,366	1,564	1,888	569	816	28,541	306	65,762	2,123	208,418	186
	Butler	205,069	203,534	9,297	1,007	761	7,038	297	1,194	77,206	371	106,363	1,535	127,941	63
	Washington	222,125	220,928	12,091	1,560	605	6,960	383	1,371	103,393	444	94,121	1,197	210,876	95
	Westmoreland	267,194	265,618	21,286	2,937	1,057	3,156	484	2,102	95,592	85	138,919	1,576	376,935	142
	Region total	1,171,940	1,158,967	109,292	18,717	8,187	33,820	7,358	10,763	389,131	1,900	579,799	12,973	2,601,858	224
Percent of Region	Allegheny	16.4	16.3	44.8	60.1	38.6	17.3	75.3	45.8	7.0	27.8	14.0	28.0	61.6	—
	Armstrong	14.6	14.5	5.6	3.2	12.7	26.4	1.2	3.3	14.7	8.7	16.1	22.5	2.9	—
	Beaver	9.8	9.7	10.5	7.3	19.1	5.6	7.7	7.6	7.3	16.1	11.3	16.4	8.0	—
	Butler	17.5	17.6	8.5	5.4	9.3	20.8	4.0	11.1	19.8	19.5	18.4	11.8	4.9	—
	Washington	19.0	19.1	11.1	8.3	7.4	20.6	5.2	12.7	26.6	23.4	16.2	9.2	8.1	—
	Westmoreland	22.7	22.8	19.5	15.7	12.9	9.3	6.6	19.5	24.6	4.5	24.0	12.1	14.5	—
	Region total	100	100	100	100	100	100	100	100	100	100	100	100	100	—

The land use and land cover code below the class name in the tables is from Anderson and others (1972). The same code also identifies land use polygons on uncolored open filed map manuscripts. Area measurements are derived from three sources: Measurement of polygons by dot planimeter—by land use class and census tract—from map manuscripts at 1:50,000; measurement by electronic planimeter of each county as a whole from published topographic map at 1:125,000; and county land and water totals for the State of Pennsylvania published by the U.S. Bureau of the Census. For five counties, electronic planimeter totals range from 0.012 percent to 1.41 percent below Census totals; for Westmoreland County the total is 0.257 percent higher. The tract and county totals also differ somewhat from those used by county planners and the Southwest Regional Planning Commission. To maintain internal consistency in this analysis, the hundreds of land use polygon totals for over eight hundred census tracts or minor civil divisions were adjusted to the county totals derived by electronic planimeter. Areas of land use changes were measured by electronic planimeter.

Land Use and Land Cover, 1973 and 1969, Allegheny County, Pennsylvania

Number of Hectares, and Differences, by Land Use Class

Year, and Differences Hectares and Percent	Total	Land	Residential 11+11a	Com., Serv. 12	Industrial 13	Extrac. Indus 14	Transport 15	Open, Other 19	Crop, Pasture 21	Other Agr 22/24	Forest-land 40	Water 50	Year, and Difference
1973 Hectares	192,254	188,626	49,004	11,255	3,159	5,861	5,541	4,928	27,244	528	81,106	3,628	1973
Difference, Hectares	0	0	−1,037	−312	−21	−140	−284	+7	+551	+41	+1,195	0	Difference, Hectares
1969 Hectares	192,254	188,626	47,967	10,943	3,138	5,721	5,257	4,935	27,795	569	82,301	3,628	1969
Difference, Percent	0	0	+2.16	+2.85	+0.67	+2.45	+5.40	−0.14	−1.98	−7.21	−1.45	0	Difference, Percent

As the map shows, Allegheny County includes most of the Pittsburgh Urbanized Area as defined by the U.S. Bureau of the Census in 1970. This table shows that the area of urban classes 11 through 15 increased 1,794 hectares county-wide (up 13.8 percent from 13,026 hectares in 1969), at the expense of 1,794 hectares in open space categories 19 through 50 (down 1.50 percent from 119,228 hectares in 1969). The land use changes from 1969 to 1973 were inventoried by photo interpretation *after* inventory of the 1973 land use and land cover. The 1969 totals (differences, or net changes) are derived by addition or subtraction from the 1973 totals. A plot of the actual change polygons is available (USGS, 1976c). A land use polygon believed to be changing in use or cover at the time of photo inventory was coded both as to prior use and as "Transitional." Area measurement totals tally such land by prior use class only in order to facilitate the identification and tallying of the differences over time, as summarized here. Issued on the eve of the 1980 Census, the 1969 and 1973 land use data and map presented here provide a basis for correlating a decade of land use change with corresponding changes in population and housing.

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Acknowledgement

Small teams of USGS geographers and cartographers have been engaged in comparative urban analyses using remote sensors aboard aircraft and satellite. Pittsburgh is one of nine U.S. urban areas studied, and this map is but one of the developmental, use-oriented products. The Pittsburgh study required new and innovative approaches and techniques during preparation of this first product of the project. James Feng was mainly responsible for interpretation: Richard Kleckner and Thomas Johnson for area measurements; Cheryl Hallam for computer tabulations; Karen Letke for open-filed maps; Leona Fine, Lendell Keaton, and William Hicks, under the supervision of Vincent Via and Kenneth Cogswell for final cartography.

Source Map and Photographs

The base map is adapted from a USGS topographic map of the Greater Pittsburgh Region, 1:125,000, 1971. The interpretation of 1973 land use and land cover for the area south of Butler, Pa., is from high altitude color infrared aerial photographs acquired by the National Aeronautics and Space Administration: Flight No. 73–045, 27 March 1973, RC–10 camera, 6-inch focal length, 9x9-in. film format, contact scale about 1:130,000 from altitude of 65,000 ft. above mean sea level. Interpretation of area north of Butler, Pa., is from similar photo coverage acquired by NASA Flight No. 73–160, 19 September 1973. The 1969 land use and land cover for Allegheny County—and analysis of land use change, 1973–1969—was compiled from black-and-white aerial photographs, USGS Project VBZB, 23 March 1969, 9x9-in. film format, contact scale 1:16,000. All flights provide stereoscopic coverage. Copies of all photographs may be ordered from EROS Data Center, Sioux Falls, SD.

UTM Grid Zone 17
Longitude West From Greenwich

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[1] Source map and photographs, and references to useful graphic aids, are identified in adjoining columns. The back of the map jacket contains references to other related published or open filed materials.

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