

William G. Lapsley & Associates, P.A.

Consulting Engineers and Land Planners

1635 Asheville Highway

Post Office Box 546

Hendersonville, North Carolina 28793

704-697-7334 • FAX 704-697-7333

November 30, 1995

Mr. Greg Eades
Environmental Engineer
Solid Waste Section
N.C. Division of Solid Waste Management
P.O. Box 27687
Raleigh, N.C. 27611-7687



William G. Lapsley, P.E.
Gary Tweed, P.E.
John B. Jeter, P.E.
Philip Ward, L.S.A.

Ref: Technical Review
Transition Plan
Henderson County Stoney Mountain Road Landfill
Permit # 45-01

Permit #	Date	Doc ID#
45-01	7/19/2011	DIN 14432

Dear Mr. Eades:

Reference is made to your October 26, 1995 letter transmitting your technical review of the Transition Plan for the Henderson County Stoney Mountain Road Landfill. The following is in response to your review comments and questions in order of your review:

GENERAL COMMENT

The Transition Plan for the Henderson County Landfill was submitted in March 1994. Your review comments approximately 19 months following the submittal in many respects are on issues which are no longer applicable to this site. Many areas of the operation of the Henderson County Landfill have change such that the Transition Plan is outdated in several areas. The Transition Plan has been revised to address not only your comments and questions, but to up date the plan as well.

SUMMARY REPORT

Side Slope Issues

The Henderson County Stoney Mountain Road Landfill is an old facility which began operation around 1960. All previously approved designs for this site were accomplished on the basis of 3:1 sides slopes utilizing berm and terrace construction technic. The current operation side slopes are at 3:1 in accordance with previously approved designs. There has been no signs of instability associated with the 3:1 side slopes and it is planned to continue with the 3:1 slopes as much as possible until the site is closed. To go back and reshape the landfill at this point in time is not only impractical but virtually impossible. Just prior to the development of the Transition Plan our firm completed a site



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utilization study of the landfill which identified several improvements which could extend the life of the site. One of these was to utilize the 3:1 side slopes originally approved and gain additional air space on the West side of the landfill where the County has previously constructed their recycling center and haul road. It is planned to move the recycling center and haul road outside the landfill base and gain this additional air space. This was discussed with the Division during 1993 and verbally approved and made a portion of the Transition Plan. At no time has the Division stated that this plan of action was unacceptable. On November 6, 1995 we again discussed this with Mr. Jim Patterson of your Division's Asheville Regional office. He stated that he had discussed it again with Mr. Julian Fuscoe, Sheri Hoytt, and you and that this approach was acceptable since it had been given prior verbal approval.

Compliance Issues

Since the submission of the Transition Plan the landfill gas migration on the Northeast side of the site at the top of the landfill has been contained and the site is now in compliance. A landfill gas collection and flare system was installed during the Spring of 1995 at the top of the landfill and is currently in operation. A larger overall landfill gas collection system is now under construction and will encompass the entire active landfill area. This system is being designed and constructed by Enerdyne Power Systems, Inc. A copy of their designs has been included in the revised Transition Plan.

New Subtitle D Landfill Time Table

At the time of the original Transition Plan preparation Henderson County was considering a new landfill. The County has dropped those plans and is no longer considering a new landfill. The County is reviewing several options all of which will require transfer of the solid waste outside the County.

LOCATION RESTRICTION DEMONSTRATION

FAA Documentation

The Transition Plan has been revised to include the local aeronautical map showing the location of the airport and landfill.

FEMA Map

The Transition Plan has been revised to include the FEMA flood map for the landfill vicinity. There are no flood zone areas at this site.

Mr. Greg Eades
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CLOSED UNIT DOCUMENTATION

The existing active landfill area is one large fill unit. The October 9, 1991 fill level boundary was taken from aerial mapping of the site which shows the landfill shapes at that time. This mapping information has been a part of the operating record for this site and available to the Division. If Mr. Patterson needs to review this information for verification, we will be glad to meet with him in order for him to provide your requested verification.

OPERATION PLAN

The operation plan portion of the Transition Plan has been revised to address those review items. We have attempted to address all items of rule .1626 with the operation plan. With respect to the sedimentation and erosion control plan, the Transition Plan shows the existing approved sedimentation and erosion control plan. This plan was previously approved by the Division of Land Resources. One additional sedimentation basin has been added since the submittal of the original Transition Plan. The location of this sedimentation basin has been added to the operation plans. This new basin was designed for the 25year/24 hour storm event and received plan approval from the Division of Land Resources. A copy of their approval has been added to the report.

CLOSURE PLAN

The closure plan for the Henderson County Landfill has been developed on the basis of continuing the 3:1 side slope fill to a top area of approximately one acre where the slopes will be reduced leading to the top of the fill. The existing landfill designs which were previously approved call for 3:1 side slopes. The entire site has been filled on this basis and the landfill is near its top with all of the side slopes soon to be completed. The maximum 25 percent slope requirement in Rule .1627(c)(3)(A) we feel is directed toward the new subtitle D landfills and is not applicable to existing sites with previously approved steeper side slopes. The construction of this site has been accomplished by building the side slopes utilizing very thick berms (30 ft berms with 20 ft terraces). This results in a very thick soil cover to waste and it is our opinion that the design of the Henderson County Landfill is such that requiring additional cap to the previously stabilized side slopes is not warranted by the Division. It is our opinion that the 1×10^{-5} cm/sec permeability can be achieved by maintaining a 3 to 1 side slope with the 30 ft. berms and 20 ft. terraces. This provides a deep soil, minimum 15 ft. to waste, on side slopes. It is felt that the soil permeability of 1×10^{-5} cm/sec would only be needed where the 3 to 1 side slope is broken

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at the top of the landfill where soils will be much shallower than side slopes. For this site the top of the landfill, with less than 3 to 1 slopes, is approximately one acre. When the landfill outside berms are being constructed they consist of a 30 ft. base. On the side slopes the depth to any waste is generally greater than 15 feet. We do not feel that the addition of an additional 18" of soil and 6" erosion layer over already stabilized slopes will achieve any additional protection from water infiltration, and the additional work could cause additional sedimentation problems due to the construction. It is still our intention to provide only the 1×10^{-5} cm/sec soil cap at the one acre top of the landfill when it is closed. The available soils on site for closure of the landfill is limited. The County during the Summer of 1995 had trucked to the site some clay soils which meet the permeability requirements. This soil was obtain from a construction site some five miles for the site and were trucked to the landfill. The clay soils have been stored in the borrow pit area and are being reserved for the closure of the site. These soils will only be sufficient for the capping of the top one acre of the site. Should the State require the cap to include side slopes then costs for closure of this site will be substantially more than current estimates. As allowed in Rule .1627(c)(1) the Division may approve an alternative cap system if it can be demonstrated that the alternative cap system will achieve an equivalent or greater reduction in infiltration as the low-permeability barrier and equivalent protection of the erosion layer. We feel that the current method of operation is justification in itself for approval of the current side slope cover and that further demonstrations are not needed. If your Division does not agree then specific demonstration guidelines should be prepared by your Division and provided to the County. It is our intention to begin preparation for closure of this site in approximately one year such that the site will be closed by the end of 1997. On this basis our closure cost estimate of \$152,659 has not changed. Costs for construction (COA) and engineering are included in this estimate.

POST CLOSURE PLAN

The Transition Plan has been revised to include the requested statement for a certification by a registered professional engineer. The estimated past closure care cost is provided in the financial analysis at the end of Section 3. The post closure care costs for year 1998 are \$246,600. These costs have been projected over the 30 year post closure period in the financial analysis. If you need additional clarification of the financial analysis, we feel that a meeting would be in order.

Mr. Greg Eades
November 30, 1995
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WATER QUALITY MONITORING PLAN

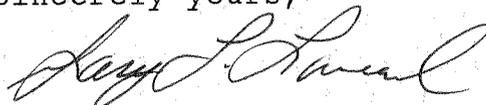
We are in the process of updating the water quality monitoring plan in accordance with the review from Mr. Bobby Lutfey dated September 26, 1995. Several of the requested items were provided by letter dated November 6, 1995 and have been incorporated into the Transition Plan.

We appreciate your difficulty in following the Transition Plan and hope that this revision will expedite your review. It has been very difficult for Henderson County to respond to reviews of the Transition Plan due to the time (19 months) it has taken for the Division to review the document and the changes that have occurred in the operation of the site since the Transition Plan was submitted. The County staff and our office have found the Division's rules as written to be very difficult to follow with the numerous references from one section to the other. Many areas of the rules are very ambiguous and lead to subjective interpretations. This results in differing opinions as to the rule meanings and how best for its implementation. We hope that this revision receives a quick review in order for the County to properly prepare for closure of this site.

We feel that the proposed closure plan for the site is still an area on contention. We have discussed our closure plan with Mr. Patterson and he agrees that it is not logical to require additional capping of the previously capped and stabilized side slopes. Again this appears impractical if not virtually impossible for this landfill and other old landfills that have 3:1 side slopes, that have been constructed utilizing berm and terrace construction. Further discussion of this issue is undoubtedly still needed.

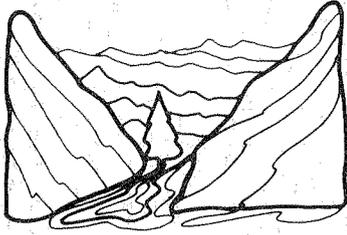
Should there be any questions or if you desire a meeting, please contact our office at 704-697-7334.

Sincerely yours,



Gary T. Tweed, P.E.

cc David Thompson
Eldon Owen
Jim Patterson



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Consulting Engineers and Land Planners

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November 6, 1995

Mr. Bobby Lutfy
Hydrogeologist
Solid Waste Section
N.C. Division of Solid Waste Management
P.O. Box 27687
Raleigh, N.C. 27611-7687

William G. Lapsley, P.E.
Gary Tweed, P.E.
John B. Jeter, P.E.
Philip Ward, L.S.A.

Ref: Hydrogeologic Review
Transition Plan
Henderson County Stoney Mountain Road Landfill
Permit # 45-01

Dear Mr. Lutfy:

Reference is made to your September 26, 1995 letter of the Hydrogeologic Review of the Local Area Study and Water Quality Monitoring Plan of the Transition Plan for the Henderson County Landfill (Permit # 45-01). The following response is offered in the order of your review comments:

Local Area Study

You stated that there was not text in the Transition Plan concerning the Local Area Study. The Transition Plan did contain text on this matter and is located in Section 2.6 page 22 of the report. The text details how the Local Characterization Study was developed.

(i) Sheet 7 was developed using topo information from the U.S.G.S. map for the area and our on site topo information. The map was generated showing only the 100 ft contour lines. We have revised the map adding the 50 ft. contour lines. Due to the scale of the drawing adding additional topo would tend to clutter the drawing. The facility plans for the site are on a larger scale and 2 ft. contours.

(ii) There are no surface water intakes in the study area and the majority of the area is served by the City of Hendersonville water system. There are a few private residential wells in the area but none within the landfill property boundary. Notes to these items have been added to Sheet 7. The majority of the private wells are located upgradient of the site near the top of Stoney Mountain where City water is not available.

(iii) Henderson County is served by Public Service Gas and



Mr. Bobby Lutfy
November 6, 1995
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Southern Bell telephone and generally have gas and telephone lines following the major highway routes. Underground gas and telephone lines would likely follow NC 191, SR 1381, and SR 1383 which fall within the Study Area. Notes to this effect have been added to the plan.

(v) The only other sources of contamination known at this time are the State D.O.T. and D.O.C. facilities adjacent to the landfill to the North. The D.O.C. has eliminated its wastewater treatment plant with a lift station and force main. The plan has been revised to show these facilities. The County animal shelter located adjacent to the solid waste boundary has septic drainfields.

Since submittal of the Transition Plan the site ground water monitoring wells have been survey and bench marks established. The plan has been revised to reflect this information.

Water Quality Monitoring Plan

Henderson County has been working with Pace Labs, Inc. in the sampling program for the Landfill. Since the Transition Plan was submitted new ground water wells have been installed and the four baseline samples taken. The plan sheet No. 8 of 12 was revised to show the new wells, old wells, and surface water sampling locations. Sampling of the surface water locations has been the same as ground water wells. We ar working with Pace Labs, Inc. on the development of the water quality monitoring plan and will submit the plan upon receipt from Pace Labs, Inc.

Sampling and Analysis Plan

Pace Labs, Inc. in addition to the Water Quality Monitoring Plan will be providing the response to your comments on the sampling and analysis plan.

Initial Sampling Results

Froeling and Robertson were contracted to install the new monitoring wells and to provide the well completion records and well information needed for the baseline report. A copy of this information has just been completed and is enclosed.

The third and fourth sampling events were performed in March and April 1995 and copies of these results have previously been forwarded to your office. The County did not conduct any Appendix II sampling. The County had advised your office by letter dated January 12, 1995 of the initial sampling results which found some contamination, and requested your office advise of any additional action that was needed. Since there was not response from your

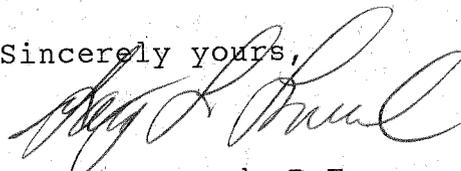
Mr. Bobby Lutfy
November 6, 1995
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office the County did not schedule the Appendix II sampling. It is not time for the site to be scheduled for the next semi-annual sampling event and the site ground water monitoring wells will be sampled for the Appendix II constituents.

Enclosed are copies of the revised plans and baseline information in accordance with reference to your review. We are in the process of addressing several items on the Transition Plan as result of review by Mr. Greg Eades with your Division. Since it has been nearly two years since the original Transition Plan was developed there are many areas of the plan which are outdated. A revised Transition Plan is being developed which will incorporated the revised Water Quality Monitoring Plan and these items address above.

Should you have any questions or need additional information, please contact our office.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Gary T. Tweed".

Gary T. Tweed, P.E.

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



September 26, 1995

Mr. Gary Tweed
William G. Lapsley & Associates
1635 Asheville Highway
Hendersonville, N.C. 28739

RE: Hydrogeologic Review Of The Local Area Study And Water Quality
Monitoring Plan Of The Transition Plan For The Henderson
County Landfill (Permit # 45-01)

Dear Mr. Tweed,

The Solid Waste Section Hydrogeologic Unit has reviewed the Local Area Study and Water Quality Monitoring Plan portions of the Transition Plan for the Henderson County Landfill. There are some items that need additional clarification. Please address the following questions and comments:

LOCAL AREA STUDY

There was no text in the report that addressed the Local Area Study requirements. The Local Characterization Study Drawing (Sheet 7) did not clearly provide all the information required by Rule .1629(b)(2)(A)(i) through (v).

- (i): Sheet 7 shows little topographic information for the area around the landfill. It does not appear to show current topographic information for the permitted facility.
- (ii): Additional information is needed on ground and surface water intakes in the vicinity of the landfill. A number of the residences on Sheet 7 do not appear to be located near a water line, yet they are not shown to be using private wells. If these residences are assumed to be using wells, this should be indicated on the margin of the drawing. Are there any surface water intakes in the study area?
- (iii) Are there any underground utility lines other than the water lines and sewer lines shown of Sheet 7?

Mr. Gary Tweed
Henderson Transition Plan
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- (v) Are there any known or potential sources of contamination in the study area?
- The on-site survey control benchmarks should also be shown on a facility map.

WATER QUALITY MONITORING PLAN

- The text and drawings of the Water Quality Monitoring Plan need to reflect the revised upgraded monitoring system that was actually installed at the landfill.
- Clarification is needed on the location of the four surface water sampling locations that have been sampled in the past.
- Surface water sampling is required to be done at the same time (semi-annually) and for the same parameters as the ground-water samples.
- Rule .1623(b)(3)(C) requires certification of the water quality monitoring system by a Licensed Geologist rather than a Professional Engineer.

SAMPLING AND ANALYSIS PLAN

- Some of the proposed analytical methods and PQLs are inconsistent with the guidelines established by the Solid Waste Section as outlined in the memos to MSWLF Owners and Operators dated June 24, 1994 and January 15, 1995.
- Regular ICP method 6010 is not approved for low-level analysis for the following metals: Antimony, Beryllium, Chromium, Cobalt, Silver, Thallium, and Vanadium.
- The proposed PQLs are too high for Barium, Beryllium, Cadmium, and Nickel.

Overall the Sampling and Analysis Plan appeared very good. Should there be any discrepancies between the plan and the Solid Waste Management Rules and policies, then the rules and policies are to take precedence.

Mr. Gary Tweed
Henderson Transition Plan
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INITIAL SAMPLING RESULTS

- No Well Completion Records or boring logs have been submitted for the new monitoring wells.
- No information on the in-situ hydraulic conductivity, porosity, and effective porosity has been provided for each of the monitoring wells in the approved monitoring system.
- No information on the rate and direction of ground-water flow has been provided for each monitoring well sampled.
- The laboratory data sheets do not indicate the analytical methods used for the analyses.

The Solid Waste Section has received water quality sampling data for sampling episodes for December 5, 1994 and January 31, 1995. We have not received data for the third and fourth sampling events that make up the baseline sampling event. This data was required to be reported to the Solid Waste Section on or before April 9, 1995. Henderson County needs to submit this data immediately.

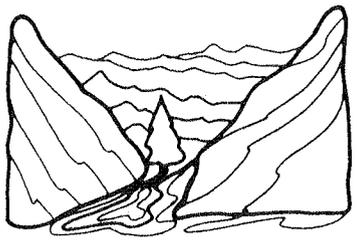
Although the complete baseline sampling report has not been received, the data from the first two sampling events indicates that the N.C. Groundwater Standards have been exceeded for several parameters. Therefore Henderson County should have sampled the monitoring wells for the Appendix II constituent list on or before July 9, 1995.

If you or Henderson County have any questions regarding this letter, please contact me at (919) 733-0692, extension 258. Please provide a response to this letter as soon as possible, so the Solid Waste Section can complete its technical review of the Henderson County Transition Plan.

Sincerely, *Bobby Lutfy*
Bobby Lutfy, Hydrogeologist
Solid Waste Section

cc: Ed Mussler, Solid Waste Section
Jim Patterson, SWS - Asheville
David Thompson, Henderson County

Greg Eades



William G. Lapsley & Associates, P.A.

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July 25, 1995

William G. Lapsley, P.E.
Gary Tweed, P.E.
John B. Jeter, P.E.
Philip Ward, L.S.A.

Mr. Carey McLelland, Finance Director
Henderson County
100 North King Street
Hendersonville, N.C. 28739

Ref: Financial Assurance for the Henderson County Landfill
Local Government Financial Test Update

Dear Mr. McLelland:

In follow up to our telephone conversation this day and the July 2, 1996 memorandum from Lee C. Flynn, N.C. Division of Solid Waste, I have updated the financial model for the closure and post closure costs for the Henderson County Stoney Mountain Road Landfill. The model has been adjusted to the 2.5% inflation rate and certain closure costs removed which the County is not going to incur as result of the contract with Enerdyne. As you are aware Enerdyne is providing the methane gas recovery system at in exchange for the gas rights to the landfill. Therefore costs associated with the methane gas system have been removed from the model. The net result of these changes is a significant reduction in the closure and post closure costs for the landfill.

As we discussed in our workshop on July 10, 1996 the cap costs have been based on capping only the top one acre of the site. This has yet to be approved by the State. The State has requested a demonstration of our proposed cap system. We are in the process of obtaining a proposal from CDM on making a demonstration for an alternative cap system. The end result may cause capping costs to change which will require a revision to the model.

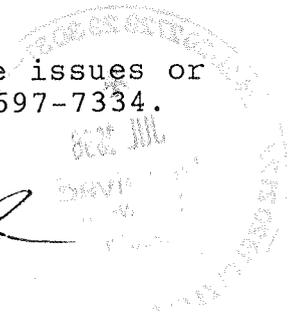
Based on the information available at this time the 1996 closure and post closure care costs are projected at \$2,305,074.00 which should be used for the Local Government Financial Test Update.

If you would like to meet to discuss any of these issues or need additional information, please contact me at 704-697-7334.

Sincerely yours,

[Handwritten Signature]
Gary T. Tweed, P.E.

cc Lee C. Flynn
Greg Eades



HENDERSON COUNTY

1 EMPLOYEE

CLOSURE / POST CLOSURE COSTS

70 ACRES TOTAL AREA

6 GAS MONITORING WELLS

STONE MOUNTAIN ROAD LANDFILL

1 ACRE FINAL COVER

3 NEW GROUNDWATER WELL INSTALLATIONS

1 EXISTING GW WELL, 2 SURFACE WATER SAMPLING

6 TOTAL WATER SAMPLING POINTS

TOTAL # OF YEARS (BEG TO END OF TF)	34
ANNUAL COST OF CAPITAL	6.50%
ANNUAL INFLATION RATE	2.50%
TRUST FUND ANNUAL ROR	4.50%
LETTER OF CREDIT ANNUAL FEE	7.75%

YEAR	1994	1995	1996	1997	1998
I. CAPITAL -- CLOSURE COSTS					
A. CAP SYSTEM				20159	
B. GRADING, SEEDING, AND DRAINAGE				2500	
C. ROAD IMPROVEMENTS				30000	
D. GROUND WATER MONITORING WELLS				0	
E. GAS MONIROTING WELLS				0	
F. LANDFILL GAS MANAGEMENT SYSTEM				0	
TOTAL	0	0	0	52659	0
II. POST CLOSURE COSTS					
A. SALARIES, WAGES, FRINGES					30,000
B. UPGRADE LANDIFLL GAS SYSTEM					
C. LANDFILL GAS SYSTEM OPERATION					0
D. FERTILIZER					5,000
E. MOWING					8,000
F. PROFESSIONAL SERVICES					6,000
G. SEDIMENTATION CONTROL					1,200
H. ROAD MAINTENANCE					7,000
I. UNIFORMS					400
J. TRAINING					500
K. STORM DRAINAGE					1,500
L. FILL SETTLEMENT AREAS					5,000
M. PUBLIC LIABILITY INSURANCE					2,000
N. GROUND/SURFACE WATER MONITORING					30,000
TOTAL	0	0	0	52,659	96,600
III. NPV SURETY REQD. TO END OF PCC	2,032,290	2,164,389	2,305,074	2,454,904	2,561,814
IV. SURETY OPTIONS					
A. TRUST FUND ANNUAL ROR	4.50%	34	33	32	31
TRUST FUND BALANCE		59,773	128,051	205,846	294,300
COUNTY CASH FLOW, TRUST FUND		59,773	63,695	67,852	72,251
COUNTY CASH FLOW, TR FND & PCCC		59,773	63,695	67,852	124,910
NPV COUNTY CF, LOC & PCCC		2,205,926	2,289,538	2,374,664	2,461,165
B. LETTER OF CREDIT ANNUAL FEE	7.75%				
LEITER OF CREDIT CASH FLOW		157,502	167,740	178,643	190,255
CO. CF, LOC CF, & PCC COST		157,502	167,740	178,643	242,914
NPV CO. CF, LOC & PCCC		4,321,400	4,444,789	4,565,960	4,684,104

1999	2000	2001	2002	2003	2004	2005
0	0	0	0	0	0	0
30,750	31,519	32,307	33,114	33,942	34,791	35,661
150,000	150,000	150,000	50,000	51,250	52,531	53,845
5,125	5,253	5,384	5,519	5,657	5,798	5,943
8,200	8,405	8,615	8,831	9,051	9,278	9,509
6,150	6,304	6,461	6,623	6,788	6,958	7,132
1,230	1,261	1,292	1,325	1,358	1,392	1,426
7,175	7,354	7,538	7,727	7,920	8,118	8,321
410	420	431	442	453	464	475
513	525	538	552	566	580	594
1,538	1,576	1,615	1,656	1,697	1,740	1,783
5,125	5,253	5,384	5,519	5,657	5,798	5,943
2,050	2,101	2,154	2,208	2,263	2,319	2,377
30,750	31,519	32,307	33,114	33,942	34,791	35,661
249,015	251,490	254,028	156,628	160,544	164,558	168,672
2,631,732	2,553,780	2,468,285	2,374,696	2,372,423	2,366,086	2,355,324
29	28	27	26	25	24	23
501,369	615,137	734,236	858,611	992,145	1,135,379	1,288,876
76,590	72,495	67,610	61,824	59,007	55,387	50,820
325,605	323,985	321,638	218,452	219,551	219,945	219,491
2,486,743	2,322,776	2,149,771	1,967,869	1,877,328	1,779,804	1,675,546
203,959	197,918	191,292	184,039	183,863	183,372	182,538
452,974	449,408	445,320	340,667	344,407	347,929	351,209
4,758,984	4,615,344	4,465,933	4,310,899	4,250,440	4,182,312	4,106,233

2006	2007	2008	2009	2010	2011	2012
0	0	0	0	0	0	0
36,552	37,466	38,403	39,363	40,347	41,355	42,389
	0					25,000
55,191	56,570	57,985	56,535	55,122	53,744	52,400
6,092	6,244	6,400	6,560	6,724	6,893	7,065
9,747	9,991	10,241	10,497	10,759	11,028	11,304
7,310	7,493	7,681	7,873	8,069	8,271	8,478
1,462	1,499	1,536	1,575	1,614	1,654	1,696
8,529	8,742	8,961	9,185	9,414	9,650	9,891
487	500	512	525	538	551	565
609	624	640	656	672	689	706
1,828	1,873	1,920	1,968	2,017	2,068	2,119
6,092	6,244	6,400	6,560	6,724	6,893	7,065
2,437	2,498	2,560	2,624	2,690	2,757	2,826
36,552	37,466	38,403	39,363	40,347	41,355	42,389
172,888	177,211	181,641	183,283	185,038	186,908	213,893
2,339,748	2,318,944	2,292,465	2,259,834	2,223,440	2,182,926	2,137,909
22	21	20	19	18	17	16
1,453,228	1,629,049	1,816,980	2,017,682	2,232,002	2,460,850	2,705,207
45,131	38,111	29,505	19,005	6,387	(8,795)	(27,105)
218,019	215,321	211,146	202,287	191,425	178,113	186,788
1,564,965	1,448,669	1,327,511	1,202,653	1,078,538	957,219	841,325
181,331	179,718	177,666	175,137	172,317	169,177	165,688
354,219	356,929	359,307	358,420	357,355	356,085	379,581
4,021,928	3,929,135	3,827,600	3,717,087	3,600,278	3,476,942	3,346,858

2013	2014	2015	2016	2017	2018	2019
0	0	0	0	0	0	0
43,449	44,535	45,649	46,790	47,960	49,158	50,387
				25,000		
51,090	49,813	48,567	47,353	46,169	45,015	43,890
7,241	7,423	7,608	7,798	7,993	8,193	8,398
11,586	11,876	12,173	12,477	12,789	13,109	13,437
8,690	8,907	9,130	9,358	9,592	9,832	10,077
1,738	1,781	1,826	1,872	1,918	1,966	2,015
10,138	10,392	10,651	10,918	11,191	11,470	11,757
579	594	609	624	639	655	672
724	742	761	780	799	819	840
2,172	2,227	2,282	2,339	2,398	2,458	2,519
7,241	7,423	7,608	7,798	7,993	8,193	8,398
2,897	2,969	3,043	3,119	3,197	3,277	3,359
43,449	44,535	45,649	46,790	47,960	49,158	50,387
190,996	193,216	195,556	198,016	225,599	203,306	206,137
2,062,979	2,006,077	1,943,256	1,874,012	1,797,807	1,689,065	1,595,549
15	14	13	12	11	10	9
2,635,946	2,561,348	2,481,053	2,394,684	2,276,845	2,175,998	2,067,780
(50,931)	(53,463)	(56,412)	(59,891)	(64,058)	(69,024)	(75,374)
140,065	139,753	139,144	138,126	161,541	134,282	130,763
709,223	615,258	515,497	409,860	298,375	156,228	32,102
159,881	155,471	150,602	145,236	139,330	130,903	123,655
350,877	348,687	346,158	343,252	364,929	334,208	329,792
3,184,823	3,040,960	2,889,935	2,731,623	2,565,926	2,367,782	2,187,480

2020	2021	2022	2023	2024	2025	2026
0	0	0	0	0	0	0
51,647	52,938	54,262	55,618	57,009	58,434	59,895
		25,000				
42,793	41,723	40,680	39,663	38,671	37,704	36,762
8,608	8,823	9,044	9,270	9,501	9,739	9,982
13,773	14,117	14,470	14,832	15,202	15,582	15,972
10,329	10,588	10,852	11,124	11,402	11,687	11,979
2,066	2,118	2,170	2,225	2,280	2,337	2,396
12,051	12,352	12,661	12,978	13,302	13,635	13,975
689	706	723	742	760	779	799
861	882	904	927	950	974	998
2,582	2,647	2,713	2,781	2,850	2,922	2,995
8,608	8,823	9,044	9,270	9,501	9,739	9,982
3,443	3,529	3,617	3,708	3,801	3,896	3,993
51,647	52,938	54,262	55,618	57,009	58,434	59,895
209,096	212,184	240,403	218,754	222,239	225,862	229,623
1,493,122	1,381,078	1,258,664	1,100,075	952,826	792,520	618,172
8	7	6	5	4	3	2
1,951,734	1,827,378	1,669,207	1,525,568	1,371,979	1,207,856	1,032,587
(83,464)	(94,069)	(108,491)	(128,849)	(160,348)	(213,733)	(322,019)
125,633	118,115	131,912	89,904	61,891	12,129	(92,396)
(96,575)	(228,485)	(361,452)	(516,858)	(640,358)	(743,873)	(804,353)
115,717	107,034	97,546	85,256	73,844	61,420	47,908
324,813	319,218	337,949	304,010	296,083	287,282	277,532
1,999,873	1,805,052	1,603,163	1,369,419	1,154,422	933,376	706,763

2027	2028
0	0
61,392	62,927
35,843	34,947
10,232	10,488
16,371	16,781
12,278	12,585
2,456	2,517
14,325	14,683
819	839
1,023	1,049
3,070	3,146
10,232	10,488
4,093	4,195
61,392	62,927
233,526	237,572
428,730	223,072
1	0
845,527	646,004
(650,323)	(660,504)
(416,797)	(422,932)
(764,241)	(397,120)
33,227	17,288
266,752	254,860
475,171	239,305