Office of Regulatory Management Economic Review Form

Agency name	DBHDS
Virginia Administrative Code (VAC) Chapter citation(s)	12 VAC 35 - 105
VAC Chapter title(s)	Rules and Regulations for Licensing Providers by the Department of Behavioral Health and Developmental Services
Action title	Amendments to align with enhanced behavioral health services
Date this document prepared	September 1, 2022

Cost Benefit Analysis

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

(1) Direct Costs
& Benefits

Describe: This regulatory change aligns DBHDS licensing regulations with DMAS behavioral health regulations and Medicaid services. The substantive provisions of the regulation include: the creation of a service definition and license for Mental Health Intensive Outpatient Service; a revised definition of Substance Abuse Intensive Outpatient Service; the creation of ACT as a newly licensed service in place of the previously licensed PACT service; removal of the provisions of the regulations related to intensive community treatment (ICT) as it will no longer be a licensed service.

Direct Costs:

- ICT providers are required to shift from a 40-hour-a-week model to 24/7 availability, utilizing additional staff resources: \$8,052,695 per year, \$80,526,950 over ten years.
- Staff training on new licensure requirements: \$30,502 one-time
- PACT/ICT providers need to employ an LMHP or resident, requiring a higher salary than a QMHP-A as they transition to ACT teams. However, the regulation does not apply to QMHP-As who served as team leads prior to July 1, 2020. Of the 42 providers in operation, only 1 was established after July 1, 2020, therefore only 1 team experienced this cost: \$11,145 per year, \$111,450 over ten years.

Direct Benefits:

- Under new regulations, ACT teams are able to employ a psychiatric nurse practitioner instead of a psychiatrist: \$5,639,760 per year, \$56,397,600 over ten years.
- The ACT model is better aligned with evidence-based practices than the former ICT/PACT model. Under an improved model, it is likely that rates of hospitalization and incarceration among individuals

	receiving ACT services to decrease. This result would benefit the Commonwealth through reduced costs to the Department of Corrections and DBHDS Mental Health Facilities. However, the new regulations and Medicaid billing changes have not been in place long enough to garner sufficient data on this result, therefore an exact dollar amount cannot be determined.		
(2) Quantitative Factors Direct Costs	Estimated Dollar Amount (a) \$80,668,902	Present Va (c) \$70,88	
Direct Costs	(a) \$60,006,702	(c) \$70,88	0,279
Direct Benefits	(b) \$56,937,600	(d) \$50,02	5,996
(3) Benefits- Costs Ratio	0.71	(4) Net Benefit	-\$20,854,283
(5) Indirect Costs & Benefits	There are no indirect costs & benefits identified in this analysis associated with this regulation.		
(6) Information Sources			

Staff Training: The cost of training was calculated by multiplying the average hourly salary for each ACT team by the training hours needed, by the number of employees per team, and by the number of teams in Virginia. Please see table 11. **LMHP** as Team Lead: Assuming that the provider hired the least expensive LMHP (Counselor), they would experience a salary increase of \$11,145 per year. This figure is calculated by subtracting the average salary of a QMHP (\$42,065) from the average salary of a Counselor (\$53,210). All salary data is shown in Table 1. **Psychiatric NP Benefit:** All 41 PACT/ICT teams were able to realize savings from employing a psychiatric nurse practitioner instead of a psychiatrist. The difference between the average salaries of the positions is \$134,820, multiplied by 42, resulting in a benefit of \$5,639,760. See Table 12. (7) Optional This regulatory action resulted in changes to the maximum number of patients ACT Teams are able to serve, as well as changes to the patient-to-staff ratio required for each team. Before alignment, ICT teams could serve 80 individuals, with a ratio of 1:10 staff to patients. PACT teams could serve 120 individuals, with a ratio of 1:10 staff to patients. Under this regulatory action, Small ACT teams can serve up to 50 individuals, with a ratio of 1:8 staff to patients; Medium ACT teams can serve up to 74 individuals, with a ratio of 1:9 staff to patients; and Large ACT teams can serve up to 120 individuals, with a ratio of 1:9 staff to patients. Table 9 shows the calculations of the total number of patients able to be served before and after the regulatory change. It is important to note that these numbers reflect potential capacity if every team was operating at the highest possible patient volume. Additionally, case load varies due to a variety of factors, and it would be impossible for providers to consistently serve exactly the maximum number allowed per each license type. The ACT model under this regulatory change allows for small, medium, and large sized teams. This change offers providers greater flexibility in starting and operating ACT teams, allowing for downsized staff requirements for smaller patient volumes. Prior to this regulatory change, all PACT teams, regardless of patient volume, were required to have at least 10 staff members (12 including a program assistant and psychiatrist). Under the ICT/PACT model, Virginia had 28 PACT teams in operation, able to serve a maximum population of 120. After this regulatory change, only 14 PACT teams became licensed as Large ACT teams, which are licensed to serve 120 individuals. The remaining providers opted to become licensed as Small or Medium ACT teams, which are

allowed to serve 50 and 74 individuals, respectively. We can deduce from these decisions that while providers were able to serve more individuals in the PACT/ICT model by regulation, in practice, many providers were not operating at a high volume, and therefore, chose to become licensed at a team size that reduced their overall salary burden. The reduction in the maximum number of patients served under this regulatory change did not create a cost for providers. The ability for providers to choose a license that scales staffing requirements with the number of patients served allows for greater flexibility in the market, and therefore, likely has a beneficial impact. Additional data on the number of patients served by team type before and after this regulatory change is needed to conduct a full analysis of this benefit.

Similarly, the change in staff ratios likely resulted in a beneficial impact, if any, to providers. Table 10 shows the staff ratio required for each provider by team type, as well as the average salary for each team. The "Salary" per individual reflects the average salary multiplied by the staff ratio. For a Small ACT team, for example, \$52,558.13 was multiplied by 1/8, to calculate a salary cost of \$6,569.77 per individual served. The table also shows the average salary cost per individual served before and after this regulatory change. The average salary cost per individual served is \$223 less after this regulatory change. While staffing ratios increased, the regulation also reduced the overall salary burden, especially for smaller teams, resulting in a small benefit to providers. Additional data on the number of individuals served by each team type before and after this regulatory change is needed to conduct a full analysis of this benefit.

• Most of the newly funded behavioral health services are consistent with existing DBHDS licensed services. For these services, including functional family therapy, multisystemic family therapy, intensive outpatient services, partial hospitalization programs, mobile crisis intervention services, 23-hour temporary observation services, crisis stabilization services, and residential crisis stabilization unit services; only very minimal changes are included in this action and they do not result in additional costs or direct benefits. The increase in rates for these services and the establishment of new services by DMAS result in independent costs and benefits to the Commonwealth, providers, and patients, however, those costs and benefits are not a result of this regulatory change.

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct Costs & Benefits	Describe the current requirement associated with the first proposed impactful change described in Table 1a here. Table is not needed, as this regulation was mandated by the General Assembly, and required to align with DMAS Medicaid Services. DBHDS did not exercise agency discretion in these regulations.	
(2) Quantitative		
Factors	Estimated Dollar Amount	Present Value
Direct Costs	(a)	(c)
Direct Benefits	(b)	(d)
(3) Benefits- Costs Ratio		(4) Net Benefit
(5) Indirect Costs & Benefits		
(6) Information Sources		
(7) Optional		

Table 1c: Costs and Benefits under an Alternative Approach

(1) Direct Costs & Benefits	Describe first alternative proposed impactful change here.	
	Table is not needed, as this regulation was mandated by the General Assembly, and required to align with DMAS Medicaid Services. DBHDS did not exercise agency discretion in these regulations.	
(2) Quantitative		
Factors	Estimated Dollar Amount	Present Value
Direct Costs	(a)	(c)

Direct Benefits	(b)	(d)
(3) Benefits- Costs Ratio		(4) Net Benefit
(5) Indirect Costs & Benefits		
(6) Information Sources		
(7) Optional		

Impact on Local Partners

Table 2: Impact on Local Partners		
(1) Direct Costs & Benefits	Of the 42 ACT Teams operating in Virginia, 36 are operated by public mental health providers (CSBs), and 6 are operated privately. Depending on their existing status and level of fidelity to the current model these teams may be impacted by the changes proposed.	
	 Direct Costs: ICT providers are required to shift from a 40-hour-a-week model to 24/7 availability, utilizing additional staff resources: \$6,901,159 Staff training on new licensure requirements: \$26,140 one-time cost. PACT/ICT providers need to employ an LMHP or resident, requiring a higher salary than a QMHP-A as they transition to ACT teams. However, the regulation does not apply to QMHP-As who served as team leads prior to July 1, 2020. Of the 42 providers in operation, only 1 was established after July 1, 2020, therefore only 1 team experienced this cost: \$9,551 	
	 Under new regulations, ACT teams are able to employ a psychiatric nurse practitioner instead of a psychiatrist: \$4,816,355 per year, The ACT model is better aligned with evidence-based practices than the former ICT/PACT model. Under an improved model, it is likely that rates of hospitalization and incarceration among individuals receiving ACT services to decrease. This result would benefit the Commonwealth through reduced costs to the Department of 	

	Corrections and DBHDS Mental Health Facilities. However, the new regulations and Medicaid billing changes have not been in place long enough to garner sufficient data on this result, therefore an exact dollar amount cannot be determined.
(2) Quantitative	
Factors	Estimated Dollar Amount
Direct Costs	(a) \$6,936,851
Direct Benefits	(b) \$4,816,355
(3) Indirect Costs & Benefits	There are no indirect costs & benefits identified in this analysis associated with this regulation.
(4) Information Sources	Of the 42 ACT Teams operating in Virginia, 36 are operated by public mental health providers (CSBs). This represents 85.7% of the full industry. Costs to local partners (CSBs) were determined by calculating the proportional costs and benefits realized by this portion of the industry. See tables 15 and 16.
(5) Assistance	
(6) Optional	

Economic Impacts on Families

Table 3: Impact on Families

1 abic 5. Impact on 1 ammes		
(1) Direct Costs	Families are not directly impacted by this regulatory change.	
& Benefits		
(2) Quantitative		
Factors	Estimated Dollar Amount	
Direct Costs	(a)	
Direct Benefits	(b)	

(3) Indirect Costs & Benefits	
(4) Information Sources	
(5) Optional	

Impacts on Small Businesses

Table 4: Impact on Small Businesses

1 able 4. Impact on Sman Dusinesses		
(1) Direct Costs	Of the 42 ACT Teams operating in Virginia, 36 are operated by public	
& Benefits	mental health providers (CSBs), and 6 are operated privately. Assuming	
	that all 6 private providers meet the definition of "small business" as	
	defined in § 2.2-4007.1, they would experience the same costs and benefits	
	described in table 1a.	

Of the 42 ACT Teams operating in Virginia, 36 are operated by public mental health providers (CSBs), and 6 are operated privately. Depending on their existing status and level of fidelity to the current model these teams may be impacted by the changes proposed.

Direct Costs:

- ICT providers are required to shift from a 40-hour-a-week model to 24/7 availability, utilizing additional staff resources: \$1,151,535
- Staff training on new licensure requirements: \$4,361 one-time cost.
- PACT/ICT providers need to employ an LMHP or resident, requiring a higher salary than a QMHP-A as they transition to ACT teams. However, the regulation does not apply to QMHP-As who served as team leads prior to July 1, 2020. Of the 42 providers in operation, only 1 was established after July 1, 2020, therefore only 1 team experienced this cost: \$1,593

Direct Benefits:

- Under new regulations, ACT teams are able to employ a psychiatric nurse practitioner instead of a psychiatrist: \$823,404
- The ACT model is better aligned with evidence-based practices than the former ICT/PACT model. Under an improved model, it is likely that rates of hospitalization and incarceration among individuals receiving ACT services to decrease. This result would benefit the Commonwealth through reduced costs to the Department of Corrections and DBHDS Mental Health Facilities. However, the

	new regulations and Medicaid billing changes have not been in place long enough to garner sufficient data on this result, therefore an exact dollar amount cannot be determined.
(2) Quantitative Factors Direct Costs	Estimated Dollar Amount (a) \$1,157,490
Direct Benefits	(b) \$823,404
(3) Indirect Costs & Benefits	There are no indirect costs or benefits to small businesses.
(4) Alternatives	No alternatives are available, this action was mandated by the General Assembly.
(5) Information Sources	Of the 42 ACT Teams operating in Virginia, 36 are operated by public mental health providers (CSBs), and 6 are operated privately. This represents 14.3% of the full industry. Costs to small businesses are determined by calculating the proportional costs and benefits realized by this portion of the industry. See tables 13 and 14.
(6) Optional	

Changes to Number of Regulatory Requirements

Table 5: Total Number of Requirements

	Number of Requirements				
Chapter number	Initial Count Additions Subtractions Net Change				
105	1,034*	10**	0	10	

(*2020 Baseline Total 968 + 66 Post 2020 in three actions [DOJ primarily; provider statement; CSB grace period].)

(**All amendments are state mandates on the regulant due to General Assembly mandate to promulgate regulations "to align with the implementation plan for changes being made to the Medicaid behavioral health regulations." Only those changes that were necessary to align DBHDS licensing regulations with anticipated changes to Medicaid behavioral health regulations by removing provisions that would conflict with newly funded behavioral health services and establishing new licensed services for those newly funded behavioral health services that cannot be nested under an existing DBHDS licenses.)

(Note: Changes duplicative of changes in the ASAM action are counted here.)

Appendix

Table 1

Position	Salar	y	Salary Data Source
			Bureau of Labor & Statistics, Annual
Psychiatrist	\$	246,600.00	Mean Wage in VA
Psychiatric Nurse			Bureau of Labor & Statistics, Annual
Practitioner	\$	112,320.00	Mean Wage in VA
			Bureau of Labor & Statistics, Annual
Psychologist (LMHP)	\$	108,910.00	Mean Wage in VA
			Bureau of Labor & Statistics, Annual
Registered Nurse	\$	76,680.00	Mean Wage in VA
			Bureau of Labor & Statistics, Annual
Social Worker (LMHP)	\$	57,420.00	Mean Wage in VA
Certified Substance Abuse			Bureau of Labor & Statistics, Annual
Counselor (CSAC)	\$	53,210.00	Mean Wage in VA
Co-Occurring Disorder	-	,	8
Specialist - LMHP or			Bureau of Labor & Statistics, Annual
Resident	\$	53,210.00	Mean Wage in VA
		·	Bureau of Labor & Statistics, Annual
Counselor (LMHP)	\$	53,210.00	Mean Wage in VA
			Bureau of Labor & Statistics, Annual
LPN	\$	48,430.00	Mean Wage in VA
			Zip Recruiter, Average Annual Pay
QMHP	\$	42,065.00	in VA
Peer Specialist (QPPMH or			Zip Recruiter, Average Annual Pay
QMPH)	\$	42,065.00	in VA
Vocational Specialist	Ψ	12,003.00	Bureau of Labor & Statistics, Annual
(QMHP)	\$	42,065.00	Mean Wage in VA
	-		
Substance Abuse Specialist	Φ.	40.065.00	Bureau of Labor & Statistics, Annual
(QMHP)	\$	42,065.00	Mean Wage in VA
Generalist Clinical Staff -			Bureau of Labor & Statistics, Annual
QMHP	\$	42,065.00	Mean Wage in VA
			Zip Recruiter, Average Annual Pay
Peer Recovery Specialist	\$	34,691.00	in VA
			Zip Recruiter, Average Annual Pay,
Program Assistant	\$	34,474.00	Behavioral Health Assistant
			Zip Recruiter, Average Annual Pay,
Generalist Clinical Staff	\$	34,474.00	Behavioral Health Assistant

Table 2

ICT Team	

Required Position	Positions needed	Salar	v
OMHP-A	1	\$	42,065.00
LPN	1	\$	48,430.00
Vocational Specialist - QMHP*	1	\$	42,065.00
-			
Substance Abuse Specialist -QMHP*	1	\$	42,065.00
Peer Specialist (QPPMH/QMHP)	1	\$	42,065.00
Program Assistant	1	\$	34,474.00
Psychiatrist	1	\$	246,600.00
Total	7	\$	497,764.00
ICT Average Salary		\$	71,109.14

^{*} Regulation provides that at least 80% of ICT Teams shall be QMHPs, these positions must meet that requirement to reach required percentage

Salary costs were calculated assuming that providers would hire mental health professionals with the lowest salary of the positions allowed under regulation. For example, providers would choose to hire able to hire an LPN over an RN.

Table 3

PACT Team						
Required Position	Positions needed	Sala	ary			
Team Leader - QMHP-A	1	\$	42,065.00			
RN	1	\$	76,680.00			
LPN	1	\$	48,430.00			
LPN	1	\$	48,430.00			
Vocational Specialist - QMHP*	1	\$	42,065.00			
Substance Abuse Specialist - QMHP*	1	\$	42,065.00			
Peer Specialist (QPPMH/QMHP)**	4	\$	42,065.00			
Program Assistant	1	\$	34,474.00			
Psychiatrist	1	\$	246,600.00			
Total	12	\$	622,874.00			
PACT ACT Avera	age Salary	\$	51,906.17			

^{*} Regulation provides that at least 80% of PACT Teams shall be QMHPs, these positions must meet that requirement to reach required percentage

^{**}Regulation provides that PACT teams have a minimum of 10 employees not including the psychiatrist and program assistant

Salary costs were calculated assuming that providers would hire mental health professionals with the lowest salary of the positions allowed under regulation. For example, providers would choose to hire able to hire an LPN over an RN.

Table 4

Small ACT Team					
Required Position	Positions needed	Salary			
Team Leader - LMHP	1	\$	53,210.00		
LPN	1	\$	48,430.00		
Vocational Specialist - QMHP	1	\$	42,065.00		
Co-Occurring Disorder Specialist - LMHP, QMHP or CSAC	1	\$	53,210.00		
ACT Peer Recovery Specialist	1	\$	34,691.00		
Program Assistant	1	\$	34,474.00		
Psychiatric NP	1	\$	112,320.00		
Generalist Clinical Staff (QMHP)	1	\$	42,065.00		
Total	8	\$	420,465.00		
Small ACT Team Average Salar	y	\$	52,558.13		

Salary costs were calculated assuming that providers would hire mental health professionals with the lowest salary of the positions allowed under regulation. For example, providers would choose to hire able to hire an LPN over an RN.

Table 5

Medium ACT Team					
Dequired Desition Positions needed Salary					
Required Position	Positions needed	Salary			
Team Leader - LMHP	1	\$ 42,065.00			
RN	1	\$ 76,680.00			
LPN	1	\$ 48,430.00			
Vocational Specialist - QMHP	1	\$ 42,065.00			
Co-Occurring Disorder					
Specialist - LMHP, QMHP or					
CSAC	1	\$ 42,065.00			
Peer Recovery Specialist	1	\$ 34,691.00			
Program Assistant	1	\$ 34,474.00			
Psychiatric NP	1	\$ 112,320.00			

Generalist Clinical Staff - Other	1	\$	34,474.00
Total	10	\$	509,329.00
Medium ACT Average Salary			50,932.90

^{*}Regulation provides that Medium ACT Teams require 2 Generalist Clinical Staff, 50% of whom must be a LMHP or QMHP

Salary costs were calculated assuming that providers would hire mental health professionals with the lowest salary of the positions allowed under regulation. For example, providers would choose to hire able to hire an LPN over an RN.

Table 6

Large ACT Team				
Required Position	Positions needed	Sala	ry	
Team Leader - LMHP	1	\$	42,065.00	
RN	1	\$	76,680.00	
LPN	1	\$	48,430.00	
LPN	1	\$	48,430.00	
Vocational Specialist - QMHP	1	\$	42,065.00	
Co-Occurring Disorder Specialist - LMHP, QMHP or CSAC	1	\$	42,065.00	
Peer Recovery Specialist	1	\$	34,691.00	
Program Assistant	1	\$	34,474.00	
Psychiatric NP	1	\$	112,320.00	
Generalist Clinical Staff - QMHP*	1	\$	42,065.00	
Generalist Clinical Staff - QMHP*	1	\$	42,065.00	
Generalist Clinical Staff - Other	1	\$	34,474.00	
Total	12	\$	599,824.00	
Large ACT Average Salary			49,985.33	

^{*}Regulation provides that Large ACT Teams require 3 Generalist Clinical Staff, 50% of whom must be a LMHP or QMHP

Salary costs were calculated assuming that providers would hire mental health professionals with the lowest salary of the positions allowed under regulation. For example, providers would choose to hire able to hire an LPN over an RN.

Table 7

Salary Cost Additional Hours ICT to Small ACT Teams		
Small ACT Hourly Average Wage	\$25.27	
Additional Hours Needed	256	
Staff Members Needed	2	
Total Staffed Hours	512	
Cost Per Week	\$12,938.24	
Cost Per Year	\$672,788.48	
Number of ICT Teams Transitioned	11	
Total Cost	\$7,400,673.28	

Table 8

Salary Cost Additional Hours ICT to Medium ACT Teams		
Medium ACT Hourly Average Wage	\$24.49	
Additional Hours Needed	256	
Staff Members Needed	2	
Total Staffed Hours	512	
Cost Per Week	\$12,538.88	
Cost Per Year	\$652,021.76	
Number of ICT Teams Transitioned to ACT	1	
Total Cost	\$652,021.76	

Table 9

Team Type	Maximum Served by Team	Ratio Required	Number of Teams	Maximum Population Served
PACT	120	1:10	28	3360
ICT	80	1:10	13	1040
Pre-regulatory change				4400
ACT Small	50	1:08	17	850
ACT Medium	74	1:09	11	814
ACT Large	120	1:09	14	1680
		Post-regu	latory change	3344

Table 10

Cost to Serve 1 Individual								
Team Type	Ratio Required	Average Salary	Salary per individual					
PACT	1:10	\$51,906.17	\$5,190.62					
ICT	1:10	\$71,109.14	\$7,110.91					
	Pre-regulatory Average \$6,150.7							
ACT Small	1:08	\$52,558.13	\$6,569.77					
ACT Medium	1:09	\$50,932.90	\$5,659.21					
ACT Large	1:09	\$49,985.33	\$5,553.93					
Post-regulatory Average \$5,927.63								

Table 11

Team Type	Average Salary	e Hourly	Training Hours Needed	Number of Employees per Team	Number of Teams in VA	Со	st to Train
Small ACT	\$	25.27	3	8	17	\$	10,309.48
Medium ACT	\$	24.49	3	10	11	\$	8,080.70
Large ACT	\$	24.03	3	12	14	\$	12,111.83
					Total	\$	30,502.01

Table 12

Savings Through Psychiatric NP				
Salary of Psychiatrist	\$246,600.00			
Salary of Psychiatric NP	\$112,320.00			
Number of Teams Able to Realize Savings	42			
Total Savings Per Year	\$5,639,760.00			

Table 13

Small Business Costs					
	Percentage of Industry				
	Provided by Private	Private Industry			
Full Industry Costs	Business	Cost			

\$8,052,695	14.3%	\$1,151,535.39
\$30,502	14.3%	\$4,361.79
\$11,145	14.3%	\$1,593.74
	Total	\$1,157,490.91

Table 14

14010 1 1						
Small Business Benefits						
	Percentage of Industry					
	Provided by Private					
Full Industry Benefits	Business	Private	Industry Benefit			
\$5,639,76	14.6%	\$	823,404.96			

Table 15

Local Partner Costs						
Full Industry Costs	Percentage of Industry Provided by CSBs	CSB Cost				
\$8,052,695	85.7%	\$6,901,159.62				
\$30,502	85.7%	\$26,140.21				
\$11,145	85.7%	\$9,551.27				
To	\$6,936,851.09					

Table 16

Table 10							
Local Partner Benefits							
	Percentage of Industry						
Full Industry Benefits	Provided by CSBs	CSB Benefit					
\$5,639,760	85.4%	\$ 4,816,355.04					

COST BENEFIT ANALYSIS WORKSHEET						
INTERIM v. July 28, 2022						
Discount Rate:	3% DO NOT CHANGE THIS NUMBER unless you wish to use a differe					
Time horizon:	10 years					

Notes:

- 1. Year 0 represents the current fiscal year
- 2. Options 1 & 2 below correspond to the two options in the grocery cart example. Option 3 below provides an ϵ
- 3. Replace the values in the green cells below with the expected costs and benefits for your analysis. Insert zero
- 4. The sections for options 2 and 3 must be filled out if the agency has any discretion over the proposed regulator

	Optio	Option 1		on 2	Ор	tion 3
Year	Cost	Benefit	Cost I	Benefit	Cost	Benefit
0	8,094,342	5,693,760				
1	8,063,840	5,693,760				
2	8,063,840	5,693,760				
3	8,063,840	5,693,760				
4	8,063,840	5,693,760				
5	8,063,840	5,693,760				
6	8,063,840	5,693,760				
7	8,063,840	5,693,760				
8	8,063,840	5,693,760				
9	8,063,840	5,693,760				
TOTAL	80,668,902	56,937,600	0	0		0 0

Present Value								
		Option	า 1	C	ption 2		Option 3	
Year	Cost	В	enefit	Cost	Benefit		Cost	Benefit
C	8,09	94,342	5,693,760		0	0	0	0
1	7,82	28,971	5,527,922		0	0	0	0
2	7,60	00,943	5,366,915		0	0	0	0
3	7,37	79,556	5,210,597		0	0	0	0
4	7,16	54,617	5,058,832		0	0	0	0
5	6,95	55,939	4,911,487		0	0	0	0
6	6,75	53,339	4,768,434		0	0	0	0
7	6,55	56,640	4,629,548		0	0	0	0
8	6,36	55,670	4,494,707		0	0	0	0
9	6,18	30,262	4,363,793		0	0	0	0
TOTAL	70,88	30,279	50,025,996		0	0	0	0

	Option 1 Option 2		Option 3	
Benefit-Cost				
Ratio	0.71	#DIV/0!	#DIV/0!	
Net Benefit	-20,854,283	0	0	

ent discount rate; if so, please make a note of this on the Economic Impact form and provide a rationale

example where costs and benefits vary from year to year.

- (0) for years where no costs or benefits are expected.
- ory changes. Use "Option 2" for the status quo and "Option 3" for one other alternative.